



REPORT No.: SZ24050224W05

TEST REPORT

APPLICANT : Horizon Powered USA Inc.

PRODUCT NAME : 5G Wi-Fi6 AX5400 CPE

MODEL NAME : HZ51

BRAND NAME : Horizon

FCC ID : 2BE94HZ51

STANDARD(S) : 47 CFR Part 2
47 CFR Part 96

RECEIPT DATE : 2024-06-28

TEST DATE : 2024-07-17 to 2024-10-25

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Change History		
Version	Date	Reason for change
1.0	2024-11-01	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Horizon Powered USA Inc.
Applicant Address:	8350 NW 52nd Terrace, Suite 301 Miami, Florida 33166 United States
Manufacturer:	Horizon Powered USA Inc.
Manufacturer Address:	8350 NW 52nd Terrace, Suite 301 Miami, Florida 33166 United States

1.2. Equipment Under Test (EUT) Description

Product Name:	5G Wi-Fi6 AX5400 CPE	
Sample No.:	3#	
Hardware Version:	V10C	
Software Version:	V1.0.1	
Modulation Type:	QPSK, 16QAM, 64QAM, 256QAM	
Operation Band:	Band 42 / 43	
Carrier Aggregation:	Not Support	
Frequency Range:	LTE Band 42	Tx: 3550MHz–3600MHz
		Rx: 3550MHz–3600MHz
	LTE Band 43	Tx: 3600MHz–3700MHz
		Rx: 3600MHz–3700MHz
Channel Bandwidth	LTE Band 42	5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 43	5MHz, 10MHz, 15MHz, 20MHz
Antenna Type:	Fixed Internal Antenna	
Antenna Gain:	LTE Band 42	3.41dBi
	LTE Band 43	3.74dBi
Accessory Information:	AC Adapter	
	Brand Name:	N/A
	Model No.:	KA36B-1203000US
	Serial No.:	N/A
	Rated Output:	12V $\pm$ 3A
	Rated Input:	100-240V $\sim$ 50/60Hz, 1A



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	Manufacturer:	Shenzhen Keyu Power Supply Technology Co., Ltd.
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Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

LTE Band 42	Maximum E.R.P./E.I.R.P. (W)				Emission Designator (99%OBW)			
BW (MHz)	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20	0.178	0.145	0.118	0.061	17M9G7D	17M9W7D	17M9W7D	17M9W7D
15	0.187	0.150	0.119	0.058	13M4G7D	13M4W7D	13M4W7D	13M4W7D
10	0.184	0.155	0.126	0.060	8M97G7D	8M95W7D	8M98W7D	8M95W7D
5	0.183	0.160	0.124	0.062	4M49G7D	4M49W7D	4M49W7D	4M50W7D
LTE Band 43	Maximum E.R.P./E.I.R.P. (W)				Emission Designator (99%OBW)			
BW (MHz)	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20	0.177	0.156	0.121	0.062	17M9G7D	17M9W7D	17M9W7D	17M9W7D
15	0.184	0.150	0.118	0.059	13M4G7D	13M4W7D	13M4W7D	13M4W7D
10	0.187	0.162	0.129	0.061	8M98G7D	8M94W7D	8M95W7D	8M96W7D
5	0.191	0.157	0.128	0.061	4M50G7D	4M48W7D	4M48W7D	4M50W7D



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2 and Part 96 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 96	CITIZENS BROADBAND RADIO SERVICE

Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046, 96.41(b)	Transmitter Conducted Output Power and ERP/EIRP	Oct. 28, 2024	Gan Jing	PASS	No deviation
2.1049	Occupied Bandwidth	Oct. 18, 2024	Gan Jing	PASS	No deviation
96.41(g)	Peak -Average Ratio	Oct. 26, 2024	Gan Jing	PASS	No deviation
2.1055	Frequency Stability	Oct. 18, 2024	Gan Jing	PASS	No deviation
2.1051, 96.41(e)	Conducted Spurious Emissions	Oct. 15, 2024	Gan Jing	PASS	No deviation
2.1051, 96.41(e)	Band Edge	Oct. 16, 2024	Gan Jing	PASS	No deviation
2.1053, 96.41(e)	Radiated Spurious Emissions	Jul. 17, 2024 Oct. 02, 2024	Gao Jianrou	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.



1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2.47 CFR Part 2, Part 96 Requirements

2.1. Transmitter Conducted Output Power and E.R.P./E.I.R.P.

2.1.1. Requirement

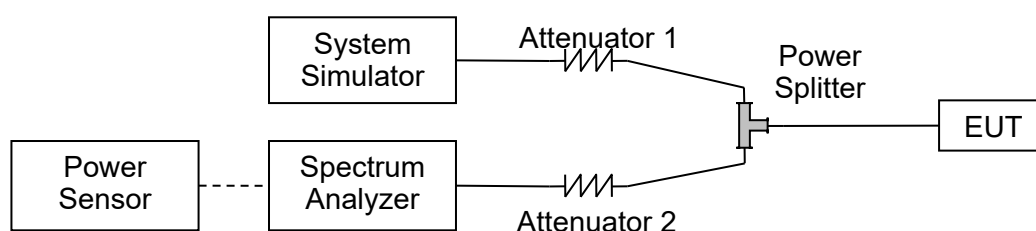
According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

The maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table as below paragraph.

Device	Maximum EIRP (dBm/10 megahertz)	Maximum PSD (dBm/MHz)
End User Device	23	n/a
Category A CBSD	30	20
Category B CBSD ¹	47	37

Additional requirement, the maximum effective isotropic radiated power (EIRP) limit for 15MHz bandwidth is 24.76dBm, and for 20MHz bandwidth is 26.00dBm.

2.1.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.



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2.1.3. Test procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

$EIRP \text{ (dBm)} = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$ERP \text{ (dBm)} = EIPR \text{ (dBm)} - 2.15$

**2.1.4.Result****Conducted Output Power:**

LTE Band 42						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43190	43340	43490
Frequency (MHz)				3560	3575	3590
20	QPSK	1	0	18.91	18.77	18.81
20	QPSK	1	49	18.76	18.68	18.65
20	QPSK	1	99	19.10	18.83	18.80
20	QPSK	50	0	17.97	17.84	17.74
20	QPSK	50	24	17.96	18.00	17.89
20	QPSK	50	50	18.10	18.05	18.00
20	QPSK	100	0	18.11	17.97	17.71
20	16QAM	1	0	18.04	18.04	18.07
20	16QAM	1	49	18.20	17.98	18.16
20	16QAM	1	99	18.07	17.82	18.00
20	16QAM	50	0	16.95	16.86	16.83
20	16QAM	50	24	17.05	16.82	16.84
20	16QAM	50	50	16.95	16.84	16.96
20	16QAM	100	0	17.13	16.93	16.69
20	64QAM	1	0	17.20	17.14	16.98
20	64QAM	1	49	17.21	17.02	17.16
20	64QAM	1	99	17.32	17.20	16.96
20	64QAM	50	0	15.93	15.83	15.92
20	64QAM	50	24	16.10	16.03	15.82
20	64QAM	50	50	16.10	16.05	15.98
20	64QAM	100	0	16.03	15.97	15.87
20	256QAM	1	0	14.00	14.01	14.12
20	256QAM	1	49	16.53	16.60	16.64
20	256QAM	1	99	16.44	16.44	16.50
20	256QAM	50	0	15.50	15.54	15.46
20	256QAM	50	24	15.42	15.58	15.48
20	256QAM	50	50	15.38	15.48	15.41
20	256QAM	100	0	15.45	15.53	15.48



LTE Band 42						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43165	43340	43515
Frequency (MHz)				3557.5	3575	3592.5
15	QPSK	1	0	18.90	18.78	18.62
15	QPSK	1	37	19.16	18.74	19.32
15	QPSK	1	74	19.04	19.17	18.78
15	QPSK	36	0	17.93	17.81	17.81
15	QPSK	36	20	17.96	17.97	17.93
15	QPSK	36	39	18.11	17.97	17.90
15	QPSK	75	0	17.96	18.01	17.95
15	16QAM	1	0	18.07	18.01	17.98
15	16QAM	1	37	18.14	18.03	18.10
15	16QAM	1	74	18.34	18.11	18.10
15	16QAM	36	0	16.98	16.85	16.81
15	16QAM	36	20	16.96	16.98	16.94
15	16QAM	36	39	17.15	16.94	16.88
15	16QAM	75	0	16.91	16.92	16.98
15	64QAM	1	0	17.15	16.82	17.16
15	64QAM	1	37	17.33	17.21	17.03
15	64QAM	1	74	17.00	17.33	17.30
15	64QAM	36	0	15.97	15.89	15.89
15	64QAM	36	20	15.99	15.97	16.01
15	64QAM	36	39	16.13	15.98	15.96
15	64QAM	75	0	16.05	15.98	15.96
15	256QAM	1	0	13.91	14.07	13.88
15	256QAM	1	37	14.25	14.07	14.03
15	256QAM	1	74	14.17	14.15	14.16
15	256QAM	36	0	13.96	13.82	13.86
15	256QAM	36	20	14.02	14.03	13.96
15	256QAM	36	39	14.07	14.00	13.92
15	256QAM	75	0	14.00	14.02	13.99



LTE Band 42						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43140	43340	43540
Frequency (MHz)				3555	3575	3595
10	QPSK	1	0	19.17	19.04	19.03
10	QPSK	1	25	19.14	19.24	19.24
10	QPSK	1	49	19.18	19.08	19.08
10	QPSK	25	0	18.04	17.81	17.96
10	QPSK	25	12	18.07	18.14	17.95
10	QPSK	25	25	18.14	18.04	18.08
10	QPSK	50	0	18.15	18.06	18.00
10	16QAM	1	0	18.37	18.20	18.40
10	16QAM	1	25	18.33	18.48	18.35
10	16QAM	1	49	18.37	18.17	18.33
10	16QAM	25	0	17.06	17.03	16.95
10	16QAM	25	12	17.07	17.16	17.00
10	16QAM	25	25	17.17	17.01	16.94
10	16QAM	50	0	17.17	17.10	16.98
10	64QAM		0	17.59	17.49	17.45
10	64QAM	1	25	17.31	17.18	17.36
10	64QAM	1	49	17.31	17.40	17.41
10	64QAM	25	0	16.07	15.93	16.01
10	64QAM	25	12	16.14	16.15	16.01
10	64QAM	25	25	16.22	16.15	16.02
10	64QAM	50	0	16.24	16.12	16.00
10	256QAM	1	0	14.22	14.13	13.95
10	256QAM	1	25	14.35	14.14	14.18
10	256QAM	1	49	14.23	14.27	14.27
10	256QAM	25	0	14.15	13.98	14.02
10	256QAM	25	12	14.16	14.15	14.04
10	256QAM	25	25	14.22	14.15	14.13
10	256QAM	50	0	14.18	14.14	14.00



LTE Band 42						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43115	43340	43565
Frequency (MHz)				3552.5	3575	3597.5
5	QPSK	1	0	19.11	19.13	19.03
5	QPSK	1	12	19.09	19.15	19.21
5	QPSK	1	24	19.06	18.85	19.12
5	QPSK	12	0	18.07	17.86	17.96
5	QPSK	12	7	18.14	17.75	17.99
5	QPSK	12	13	18.11	17.91	18.15
5	QPSK	25	0	18.08	18.03	17.82
5	16QAM	1	0	18.31	18.20	18.31
5	16QAM	1	12	18.62	18.22	18.22
5	16QAM	1	24	18.27	18.36	18.24
5	16QAM	12	0	17.20	17.11	16.96
5	16QAM	12	7	17.27	17.11	17.06
5	16QAM	12	13	17.13	17.11	17.06
5	16QAM	25	0	17.12	17.06	16.96
5	64QAM	1	0	17.51	17.36	17.27
5	64QAM	1	12	17.23	17.32	17.26
5	64QAM	1	24	17.23	17.26	17.36
5	64QAM	12	0	15.99	16.12	15.95
5	64QAM	12	7	16.06	16.15	15.96
5	64QAM	12	13	16.14	16.10	16.10
5	64QAM	25	0	16.16	16.11	15.98
5	256QAM	1	0	14.15	14.13	13.92
5	256QAM	1	12	14.49	14.29	14.33
5	256QAM	1	24	14.30	14.09	14.10
5	256QAM	12	0	14.14	14.13	13.90
5	256QAM	12	7	14.17	14.14	14.04
5	256QAM	12	13	14.17	14.05	14.00
5	256QAM	25	0	14.09	14.16	14.04



LTE Band 43						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43690	44090	44490
Frequency (MHz)				3610	3650	3690
20	QPSK	1	0	18.48	18.39	18.70
20	QPSK	1	49	18.19	18.23	18.47
20	QPSK	1	99	18.44	18.73	18.66
20	QPSK	50	0	17.26	17.53	17.73
20	QPSK	50	24	17.46	17.64	17.88
20	QPSK	50	50	17.47	17.69	17.88
20	QPSK	100	0	17.37	17.61	17.78
20	16QAM	1	0	17.55	17.55	17.81
20	16QAM	1	49	17.58	17.89	18.20
20	16QAM	1	99	17.62	17.98	18.07
20	16QAM	50	0	16.40	16.54	16.64
20	16QAM	50	24	16.49	16.47	16.95
20	16QAM	50	50	16.46	16.47	16.91
20	16QAM	100	0	16.36	16.64	16.91
20	64QAM	1	0	16.65	16.89	17.07
20	64QAM	1	49	16.75	16.94	17.05
20	64QAM	1	99	16.53	16.88	16.90
20	64QAM	50	0	15.31	15.54	15.79
20	64QAM	50	24	15.43	15.65	15.85
20	64QAM	50	50	15.43	15.73	15.87
20	64QAM	100	0	15.43	15.65	15.78
20	256QAM	1	0	13.59	13.83	13.73
20	256QAM	1	49	13.57	13.57	13.89
20	256QAM	1	99	13.65	13.99	14.17
20	256QAM	50	0	13.33	13.53	13.65
20	256QAM	50	24	13.49	13.76	13.88
20	256QAM	50	50	13.47	13.71	13.88
20	256QAM	100	0	13.44	13.64	13.90



LTE Band 43						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43665	44090	445151
Frequency (MHz)				3607.5	3650	3692.5
15	QPSK	1	0	18.31	18.45	18.62
15	QPSK	1	37	18.35	18.90	18.74
15	QPSK	1	74	18.28	18.41	18.79
15	QPSK	36	0	17.38	17.46	17.67
15	QPSK	36	20	17.34	17.62	17.82
15	QPSK	36	39	17.40	17.58	17.81
15	QPSK	75	0	17.46	17.56	17.85
15	16QAM	1	0	17.46	17.82	17.95
15	16QAM	1	37	17.81	17.75	17.98
15	16QAM	1	74	17.49	17.93	18.03
15	16QAM	36	0	16.36	16.50	16.51
15	16QAM	36	20	16.44	16.62	16.75
15	16QAM	36	39	16.44	16.72	16.85
15	16QAM	75	0	16.44	16.61	16.86
15	64QAM	1	0	16.54	16.64	16.93
15	64QAM	1	37	16.67	16.98	16.85
15	64QAM	1	74	16.64	16.77	16.95
15	64QAM	36	0	15.38	15.51	15.73
15	64QAM	36	20	15.43	15.65	15.80
15	64QAM	36	39	15.34	15.70	15.82
15	64QAM	75	0	15.31	15.59	15.84
15	256QAM	1	0	13.42	13.59	13.60
15	256QAM	1	37	13.46	13.60	13.79
15	256QAM	1	74	13.56	13.65	14.00
15	256QAM	36	0	13.41	13.55	13.74
15	256QAM	36	20	13.50	13.66	13.80
15	256QAM	36	39	13.43	13.71	13.93
15	256QAM	75	0	13.50	13.64	13.87



LTE Band 43						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43640	44090	44540
Frequency (MHz)				3605	3650	3695
10	QPSK	1	0	18.64	18.78	18.92
10	QPSK	1	25	18.50	18.88	18.92
10	QPSK	1	49	18.47	18.93	18.98
10	QPSK	25	0	17.41	17.61	17.90
10	QPSK	25	12	17.59	17.73	18.02
10	QPSK	25	25	17.60	17.85	17.86
10	QPSK	50	0	17.58	17.74	17.92
10	16QAM	1	0	17.70	18.01	18.36
10	16QAM	1	25	17.66	17.93	17.94
10	16QAM	1	49	17.83	17.98	18.15
10	16QAM	25	0	16.39	16.63	17.00
10	16QAM	25	12	16.60	16.83	17.04
10	16QAM	25	25	16.40	16.76	16.97
10	16QAM	50	0	16.62	16.64	16.90
10	64QAM	1	0	16.85	17.10	17.37
10	64QAM	1	25	16.71	16.68	17.31
10	64QAM	1	49	16.84	17.06	17.06
10	64QAM	25	0	15.38	15.67	15.84
10	64QAM	25	12	15.66	15.80	16.01
10	64QAM	25	25	15.59	15.75	15.97
10	64QAM	50	0	15.58	15.78	16.01
10	256QAM	1	0	13.75	13.73	14.09
10	256QAM	1	25	13.73	13.88	14.00
10	256QAM	1	49	13.47	13.87	13.94
10	256QAM	25	0	13.49	13.64	13.84
10	256QAM	25	12	13.62	13.82	14.04
10	256QAM	25	25	13.58	13.76	13.98
10	256QAM	50	0	13.62	13.78	14.03



LTE Band 43						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				43615	44090	44565
Frequency (MHz)				3602.5	3650	3697.5
5	QPSK	1	0	18.59	18.74	18.77
5	QPSK	1	12	18.74	18.70	19.08
5	QPSK	1	24	18.48	18.61	18.86
5	QPSK	12	0	17.57	17.54	17.88
5	QPSK	12	7	17.64	17.76	18.02
5	QPSK	12	13	17.47	17.74	17.93
5	QPSK	25	0	17.59	17.68	17.91
5	16QAM	1	0	17.76	17.90	18.23
5	16QAM	1	12	17.78	17.90	18.14
5	16QAM	1	24	17.66	18.03	18.08
5	16QAM	12	0	16.49	16.67	17.00
5	16QAM	12	7	16.49	16.68	17.04
5	16QAM	12	13	16.53	16.82	17.04
5	16QAM	25	0	16.54	16.73	16.93
5	64QAM	1	0	16.79	16.97	17.33
5	64QAM	1	12	16.96	17.23	17.31
5	64QAM	1	24	16.87	17.04	17.20
5	64QAM	12	0	15.57	15.77	15.91
5	64QAM	12	7	15.64	15.82	15.92
5	64QAM	12	13	15.57	15.70	15.98
5	64QAM	25	0	15.56	15.70	15.97
5	256QAM	1	0	13.56	13.50	13.77
5	256QAM	1	12	13.85	14.06	14.09
5	256QAM	1	24	13.71	13.98	14.02
5	256QAM	12	0	13.50	13.66	13.94
5	256QAM	12	7	13.68	13.78	13.92
5	256QAM	12	13	13.57	13.79	13.99
5	256QAM	25	0	13.62	13.74	13.86

**Effective Radiated Power and Effective Isotropic Radiated Power:**

LTE Band 42				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43190		43340		43490	
Frequency (MHz)				3560		3575		3590	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	22.32	0.171	22.18	0.165	22.22	0.167
20	QPSK	1	49	22.17	0.165	22.09	0.162	22.06	0.161
20	QPSK	1	99	22.51	0.178	22.24	0.167	22.21	0.166
20	QPSK	50	0	21.38	0.137	21.25	0.133	21.15	0.130
20	QPSK	50	24	21.37	0.137	21.41	0.138	21.30	0.135
20	QPSK	50	50	21.51	0.142	21.46	0.140	21.41	0.138
20	QPSK	100	0	21.52	0.142	21.38	0.137	21.12	0.129
20	16QAM	1	0	21.45	0.140	21.45	0.140	21.48	0.141
20	16QAM	1	49	21.61	0.145	21.39	0.138	21.57	0.144
20	16QAM	1	99	21.48	0.141	21.23	0.133	21.41	0.138
20	16QAM	50	0	20.36	0.109	20.27	0.106	20.24	0.106
20	16QAM	50	24	20.46	0.111	20.23	0.105	20.25	0.106
20	16QAM	50	50	20.36	0.109	20.25	0.106	20.37	0.109
20	16QAM	100	0	20.54	0.113	20.34	0.108	20.10	0.102
20	64QAM	1	0	20.61	0.115	20.55	0.114	20.39	0.109
20	64QAM	1	49	20.62	0.115	20.43	0.110	20.57	0.114
20	64QAM	1	99	20.73	0.118	20.61	0.115	20.37	0.109
20	64QAM	50	0	19.34	0.086	19.24	0.084	19.33	0.086
20	64QAM	50	24	19.51	0.089	19.44	0.088	19.23	0.084
20	64QAM	50	50	19.51	0.089	19.46	0.088	19.39	0.087
20	64QAM	100	0	19.44	0.088	19.38	0.087	19.28	0.085
20	256QAM	1	0	17.41	0.055	17.42	0.055	17.53	0.057
20	256QAM	1	49	17.60	0.058	17.40	0.055	17.49	0.056
20	256QAM	1	99	17.85	0.061	17.47	0.056	17.60	0.058
20	256QAM	50	0	17.38	0.055	17.28	0.053	17.34	0.054
20	256QAM	50	24	17.55	0.057	17.46	0.056	17.30	0.054
20	256QAM	50	50	17.54	0.057	17.45	0.056	17.42	0.055
20	256QAM	100	0	17.52	0.056	17.42	0.055	17.36	0.054



LTE Band 42				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43165		43340		43515	
Frequency (MHz)				3557.5		3575		3592.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	22.31	0.170	22.19	0.166	22.03	0.160
15	QPSK	1	37	22.57	0.181	22.15	0.164	22.73	0.187
15	QPSK	1	74	22.45	0.176	22.58	0.181	22.19	0.166
15	QPSK	36	0	21.34	0.136	21.22	0.132	21.22	0.132
15	QPSK	36	20	21.37	0.137	21.38	0.137	21.34	0.136
15	QPSK	36	39	21.52	0.142	21.38	0.137	21.31	0.135
15	QPSK	75	0	21.37	0.137	21.42	0.139	21.36	0.137
15	16QAM	1	0	21.48	0.141	21.42	0.139	21.39	0.138
15	16QAM	1	37	21.55	0.143	21.44	0.139	21.51	0.142
15	16QAM	1	74	21.75	0.150	21.52	0.142	21.51	0.142
15	16QAM	36	0	20.39	0.109	20.26	0.106	20.22	0.105
15	16QAM	36	20	20.37	0.109	20.39	0.109	20.35	0.108
15	16QAM	36	39	20.56	0.114	20.35	0.108	20.29	0.107
15	16QAM	75	0	20.32	0.108	20.33	0.108	20.39	0.109
15	64QAM	1	0	20.56	0.114	20.23	0.105	20.57	0.114
15	64QAM	1	37	20.74	0.119	20.62	0.115	20.44	0.111
15	64QAM	1	74	20.41	0.110	20.74	0.119	20.71	0.118
15	64QAM	36	0	19.38	0.087	19.30	0.085	19.30	0.085
15	64QAM	36	20	19.40	0.087	19.38	0.087	19.42	0.087
15	64QAM	36	39	19.54	0.090	19.39	0.087	19.37	0.086
15	64QAM	75	0	19.46	0.088	19.39	0.087	19.37	0.086
15	256QAM	1	0	17.32	0.054	17.48	0.056	17.29	0.054
15	256QAM	1	37	17.66	0.058	17.48	0.056	17.44	0.055
15	256QAM	1	74	17.58	0.057	17.56	0.057	17.57	0.057
15	256QAM	36	0	17.37	0.055	17.23	0.053	17.27	0.053
15	256QAM	36	20	17.43	0.055	17.44	0.055	17.37	0.055
15	256QAM	36	39	17.48	0.056	17.41	0.055	17.33	0.054
15	256QAM	75	0	17.41	0.055	17.43	0.055	17.40	0.055



LTE Band 42				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43140		43340		43540	
Frequency (MHz)				3555		3575		3595	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.58	0.181	22.45	0.176	22.44	0.175
10	QPSK	1	25	22.55	0.180	22.65	0.184	22.65	0.184
10	QPSK	1	49	22.59	0.182	22.49	0.177	22.49	0.177
10	QPSK	25	0	21.45	0.140	21.22	0.132	21.37	0.137
10	QPSK	25	12	21.48	0.141	21.55	0.143	21.36	0.137
10	QPSK	25	25	21.55	0.143	21.45	0.140	21.49	0.141
10	QPSK	50	0	21.56	0.143	21.47	0.140	21.41	0.138
10	16QAM	1	0	21.78	0.151	21.61	0.145	21.81	0.152
10	16QAM	1	25	21.74	0.149	21.89	0.155	21.76	0.150
10	16QAM	1	49	21.78	0.151	21.58	0.144	21.74	0.149
10	16QAM	25	0	20.47	0.111	20.44	0.111	20.36	0.109
10	16QAM	25	12	20.48	0.112	20.57	0.114	20.41	0.110
10	16QAM	25	25	20.58	0.114	20.42	0.110	20.35	0.108
10	16QAM	50	0	20.58	0.114	20.51	0.112	20.39	0.109
10	64QAM	1	0	21.00	0.126	20.90	0.123	20.86	0.122
10	64QAM	1	25	20.72	0.118	20.59	0.115	20.77	0.119
10	64QAM	1	49	20.72	0.118	20.81	0.121	20.82	0.121
10	64QAM	25	0	19.48	0.089	19.34	0.086	19.42	0.087
10	64QAM	25	12	19.55	0.090	19.56	0.090	19.42	0.087
10	64QAM	25	25	19.63	0.092	19.56	0.090	19.43	0.088
10	64QAM	50	0	19.65	0.092	19.53	0.090	19.41	0.087
10	256QAM	1	0	17.63	0.058	17.54	0.057	17.36	0.054
10	256QAM	1	25	17.76	0.060	17.55	0.057	17.59	0.057
10	256QAM	1	49	17.64	0.058	17.68	0.059	17.68	0.059
10	256QAM	25	0	17.56	0.057	17.39	0.055	17.43	0.055
10	256QAM	25	12	17.57	0.057	17.56	0.057	17.45	0.056
10	256QAM	25	25	17.63	0.058	17.56	0.057	17.54	0.057
10	256QAM	50	0	17.59	0.057	17.55	0.057	17.41	0.055



LTE Band 42				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43115		43340		43565	
Frequency (MHz)				3552.5		3575		3597.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.52	0.179	22.54	0.179	22.44	0.175
5	QPSK	1	12	22.50	0.178	22.56	0.180	22.62	0.183
5	QPSK	1	24	22.47	0.177	22.26	0.168	22.53	0.179
5	QPSK	12	0	21.48	0.141	21.27	0.134	21.37	0.137
5	QPSK	12	7	21.55	0.143	21.16	0.131	21.40	0.138
5	QPSK	12	13	21.52	0.142	21.32	0.136	21.56	0.143
5	QPSK	25	0	21.49	0.141	21.44	0.139	21.23	0.133
5	16QAM	1	0	21.72	0.149	21.61	0.145	21.72	0.149
5	16QAM	1	12	22.03	0.160	21.63	0.146	21.63	0.146
5	16QAM	1	24	21.68	0.147	21.77	0.150	21.65	0.146
5	16QAM	12	0	20.61	0.115	20.52	0.113	20.37	0.109
5	16QAM	12	7	20.68	0.117	20.52	0.113	20.47	0.111
5	16QAM	12	13	20.54	0.113	20.52	0.113	20.47	0.111
5	16QAM	25	0	20.53	0.113	20.47	0.111	20.37	0.109
5	64QAM	1	0	20.92	0.124	20.77	0.119	20.68	0.117
5	64QAM	1	12	20.64	0.116	20.73	0.118	20.67	0.117
5	64QAM	1	24	20.64	0.116	20.67	0.117	20.77	0.119
5	64QAM	12	0	19.40	0.087	19.53	0.090	19.36	0.086
5	64QAM	12	7	19.47	0.089	19.56	0.090	19.37	0.086
5	64QAM	12	13	19.55	0.090	19.51	0.089	19.51	0.089
5	64QAM	25	0	19.57	0.091	19.52	0.090	19.39	0.087
5	256QAM	1	0	17.56	0.057	17.54	0.057	17.33	0.054
5	256QAM	1	12	17.90	0.062	17.70	0.059	17.74	0.059
5	256QAM	1	24	17.71	0.059	17.50	0.056	17.51	0.056
5	256QAM	12	0	17.55	0.057	17.54	0.057	17.31	0.054
5	256QAM	12	7	17.58	0.057	17.55	0.057	17.45	0.056
5	256QAM	12	13	17.58	0.057	17.46	0.056	17.41	0.055
5	256QAM	25	0	17.50	0.056	17.57	0.057	17.45	0.056



LTE Band 43				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43690		44090		44490	
Frequency (MHz)				3610		3650		3690	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	22.22	0.167	22.13	0.163	22.44	0.175
20	QPSK	1	49	21.93	0.156	21.97	0.157	22.21	0.166
20	QPSK	1	99	22.18	0.165	22.47	0.177	22.40	0.174
20	QPSK	50	0	21.00	0.126	21.27	0.134	21.47	0.140
20	QPSK	50	24	21.20	0.132	21.38	0.137	21.62	0.145
20	QPSK	50	50	21.21	0.132	21.43	0.139	21.62	0.145
20	QPSK	100	0	21.11	0.129	21.35	0.136	21.52	0.142
20	16QAM	1	0	21.29	0.135	21.29	0.135	21.55	0.143
20	16QAM	1	49	21.32	0.136	21.63	0.146	21.94	0.156
20	16QAM	1	99	21.36	0.137	21.72	0.149	21.81	0.152
20	16QAM	50	0	20.14	0.103	20.28	0.107	20.38	0.109
20	16QAM	50	24	20.23	0.105	20.21	0.105	20.69	0.117
20	16QAM	50	50	20.20	0.105	20.21	0.105	20.65	0.116
20	16QAM	100	0	20.10	0.102	20.38	0.109	20.65	0.116
20	64QAM	1	0	20.39	0.109	20.63	0.116	20.81	0.121
20	64QAM	1	49	20.49	0.112	20.68	0.117	20.79	0.120
20	64QAM	1	99	20.27	0.106	20.62	0.115	20.64	0.116
20	64QAM	50	0	19.05	0.080	19.28	0.085	19.53	0.090
20	64QAM	50	24	19.17	0.083	19.39	0.087	19.59	0.091
20	64QAM	50	50	19.17	0.083	19.47	0.089	19.61	0.091
20	64QAM	100	0	19.17	0.083	19.39	0.087	19.52	0.090
20	256QAM	1	0	17.33	0.054	17.57	0.057	17.47	0.056
20	256QAM	1	49	17.31	0.054	17.31	0.054	17.63	0.058
20	256QAM	1	99	17.39	0.055	17.73	0.059	17.91	0.062
20	256QAM	50	0	17.07	0.051	17.27	0.053	17.39	0.055
20	256QAM	50	24	17.23	0.053	17.50	0.056	17.62	0.058
20	256QAM	50	50	17.21	0.053	17.45	0.056	17.62	0.058
20	256QAM	100	0	17.18	0.052	17.38	0.055	17.64	0.058



LTE Band 43				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43665		44090		445151	
Frequency (MHz)				3607.5		3650		3692.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	22.05	0.160	22.19	0.166	22.36	0.172
15	QPSK	1	37	22.09	0.162	22.64	0.184	22.48	0.177
15	QPSK	1	74	22.02	0.159	22.15	0.164	22.53	0.179
15	QPSK	36	0	21.12	0.129	21.20	0.132	21.41	0.138
15	QPSK	36	20	21.08	0.128	21.36	0.137	21.56	0.143
15	QPSK	36	39	21.14	0.130	21.32	0.136	21.55	0.143
15	QPSK	75	0	21.20	0.132	21.30	0.135	21.59	0.144
15	16QAM	1	0	21.20	0.132	21.56	0.143	21.69	0.148
15	16QAM	1	37	21.55	0.143	21.49	0.141	21.72	0.149
15	16QAM	1	74	21.23	0.133	21.67	0.147	21.77	0.150
15	16QAM	36	0	20.10	0.102	20.24	0.106	20.25	0.106
15	16QAM	36	20	20.18	0.104	20.36	0.109	20.49	0.112
15	16QAM	36	39	20.18	0.104	20.46	0.111	20.59	0.115
15	16QAM	75	0	20.18	0.104	20.35	0.108	20.60	0.115
15	64QAM	1	0	20.28	0.107	20.38	0.109	20.67	0.117
15	64QAM	1	37	20.41	0.110	20.72	0.118	20.59	0.115
15	64QAM	1	74	20.38	0.109	20.51	0.112	20.69	0.117
15	64QAM	36	0	19.12	0.082	19.25	0.084	19.47	0.089
15	64QAM	36	20	19.17	0.083	19.39	0.087	19.54	0.090
15	64QAM	36	39	19.08	0.081	19.44	0.088	19.56	0.090
15	64QAM	75	0	19.05	0.080	19.33	0.086	19.58	0.091
15	256QAM	1	0	17.16	0.052	17.33	0.054	17.34	0.054
15	256QAM	1	37	17.20	0.052	17.34	0.054	17.53	0.057
15	256QAM	1	74	17.30	0.054	17.39	0.055	17.74	0.059
15	256QAM	36	0	17.15	0.052	17.29	0.054	17.48	0.056
15	256QAM	36	20	17.24	0.053	17.40	0.055	17.54	0.057
15	256QAM	36	39	17.17	0.052	17.45	0.056	17.67	0.058
15	256QAM	75	0	17.24	0.053	17.38	0.055	17.61	0.058



LTE Band 43				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43640		44090		44540	
Frequency (MHz)				3605		3650		3695	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.38	0.173	22.52	0.179	22.66	0.185
10	QPSK	1	25	22.24	0.167	22.62	0.183	22.66	0.185
10	QPSK	1	49	22.21	0.166	22.67	0.185	22.72	0.187
10	QPSK	25	0	21.15	0.130	21.35	0.136	21.64	0.146
10	QPSK	25	12	21.33	0.136	21.47	0.140	21.76	0.150
10	QPSK	25	25	21.34	0.136	21.59	0.144	21.60	0.145
10	QPSK	50	0	21.32	0.136	21.48	0.141	21.66	0.147
10	16QAM	1	0	21.44	0.139	21.75	0.150	22.10	0.162
10	16QAM	1	25	21.40	0.138	21.67	0.147	21.68	0.147
10	16QAM	1	49	21.57	0.144	21.72	0.149	21.89	0.155
10	16QAM	25	0	20.13	0.103	20.37	0.109	20.74	0.119
10	16QAM	25	12	20.34	0.108	20.57	0.114	20.78	0.120
10	16QAM	25	25	20.14	0.103	20.50	0.112	20.71	0.118
10	16QAM	50	0	20.36	0.109	20.38	0.109	20.64	0.116
10	64QAM	1	0	20.59	0.115	20.84	0.121	21.11	0.129
10	64QAM	1	25	20.45	0.111	20.42	0.110	21.05	0.127
10	64QAM	1	49	20.58	0.114	20.80	0.120	20.80	0.120
10	64QAM	25	0	19.12	0.082	19.41	0.087	19.58	0.091
10	64QAM	25	12	19.40	0.087	19.54	0.090	19.75	0.094
10	64QAM	25	25	19.33	0.086	19.49	0.089	19.71	0.094
10	64QAM	50	0	19.32	0.086	19.52	0.090	19.75	0.094
10	256QAM	1	0	17.49	0.056	17.47	0.056	17.83	0.061
10	256QAM	1	25	17.47	0.056	17.62	0.058	17.74	0.059
10	256QAM	1	49	17.21	0.053	17.61	0.058	17.68	0.059
10	256QAM	25	0	17.23	0.053	17.38	0.055	17.58	0.057
10	256QAM	25	12	17.36	0.054	17.56	0.057	17.78	0.060
10	256QAM	25	25	17.32	0.054	17.50	0.056	17.72	0.059
10	256QAM	50	0	17.36	0.054	17.52	0.056	17.77	0.060



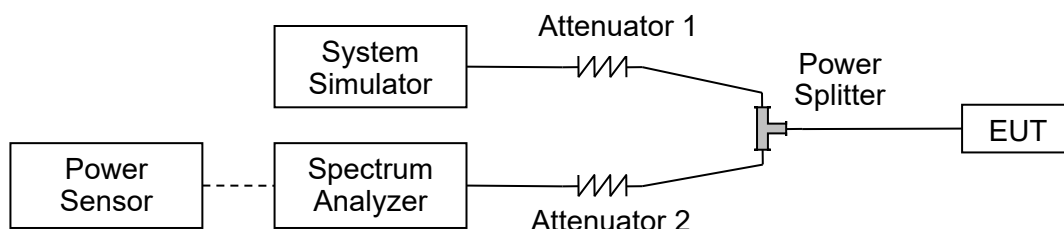
LTE Band 43				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				43615		44090		44565	
Frequency (MHz)				3602.5		3650		3697.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.33	0.171	22.48	0.177	22.51	0.178
5	QPSK	1	12	22.48	0.177	22.44	0.175	22.82	0.191
5	QPSK	1	24	22.22	0.167	22.35	0.172	22.60	0.182
5	QPSK	12	0	21.31	0.135	21.28	0.134	21.62	0.145
5	QPSK	12	7	21.38	0.137	21.50	0.141	21.76	0.150
5	QPSK	12	13	21.21	0.132	21.48	0.141	21.67	0.147
5	QPSK	25	0	21.33	0.136	21.42	0.139	21.65	0.146
5	16QAM	1	0	21.50	0.141	21.64	0.146	21.97	0.157
5	16QAM	1	12	21.52	0.142	21.64	0.146	21.88	0.154
5	16QAM	1	24	21.40	0.138	21.77	0.150	21.82	0.152
5	16QAM	12	0	20.23	0.105	20.41	0.110	20.74	0.119
5	16QAM	12	7	20.23	0.105	20.42	0.110	20.78	0.120
5	16QAM	12	13	20.27	0.106	20.56	0.114	20.78	0.120
5	16QAM	25	0	20.28	0.107	20.47	0.111	20.67	0.117
5	64QAM	1	0	20.53	0.113	20.71	0.118	21.07	0.128
5	64QAM	1	12	20.70	0.117	20.97	0.125	21.05	0.127
5	64QAM	1	24	20.61	0.115	20.78	0.120	20.94	0.124
5	64QAM	12	0	19.31	0.085	19.51	0.089	19.65	0.092
5	64QAM	12	7	19.38	0.087	19.56	0.090	19.66	0.092
5	64QAM	12	13	19.31	0.085	19.44	0.088	19.72	0.094
5	64QAM	25	0	19.30	0.085	19.44	0.088	19.71	0.094
5	256QAM	1	0	17.30	0.054	17.24	0.053	17.51	0.056
5	256QAM	1	12	17.59	0.057	17.80	0.060	17.83	0.061
5	256QAM	1	24	17.45	0.056	17.72	0.059	17.76	0.060
5	256QAM	12	0	17.24	0.053	17.40	0.055	17.68	0.059
5	256QAM	12	7	17.42	0.055	17.52	0.056	17.66	0.058
5	256QAM	12	13	17.31	0.054	17.53	0.057	17.73	0.059
5	256QAM	25	0	17.36	0.054	17.48	0.056	17.60	0.058

2.2. Occupied Bandwidth

2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.2.3. Test procedure

KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

**2.2.4. Test Result**

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	99% BW (MHz)	26dB BW (MHz)	Verdict
B42	5	Low	43115	3552.5	QPSK	4.4884	5.0340	PASS
B42	5	Low	43115	3552.5	16QAM	4.4860	4.9517	PASS
B42	5	Low	43115	3552.5	64QAM	4.4729	4.7917	PASS
B42	5	Low	43115	3552.5	256QAM	4.4767	5.0504	PASS
B42	5	Mid	43340	3575	QPSK	4.4903	4.9270	PASS
B42	5	Mid	43340	3575	16QAM	4.4791	4.9319	PASS
B42	5	Mid	43340	3575	64QAM	4.4905	4.9667	PASS
B42	5	Mid	43340	3575	256QAM	4.4974	4.9574	PASS
B42	5	High	43565	3597.5	QPSK	4.4733	4.9531	PASS
B42	5	High	43565	3597.5	16QAM	4.4712	4.9182	PASS
B42	5	High	43565	3597.5	64QAM	4.4738	4.9510	PASS
B42	5	High	43565	3597.5	256QAM	4.4704	4.9773	PASS
B42	10	Low	43140	3555	QPSK	8.9632	9.7574	PASS
B42	10	Low	43140	3555	16QAM	8.9522	9.7716	PASS
B42	10	Low	43140	3555	64QAM	8.9532	9.7098	PASS
B42	10	Low	43140	3555	256QAM	8.9506	9.8013	PASS
B42	10	Mid	43340	3575	QPSK	8.9688	9.7006	PASS
B42	10	Mid	43340	3575	16QAM	8.9252	9.7234	PASS
B42	10	Mid	43340	3575	64QAM	8.9592	9.7055	PASS
B42	10	Mid	43340	3575	256QAM	8.9426	9.9113	PASS
B42	10	High	43540	3595	QPSK	8.9371	9.5857	PASS
B42	10	High	43540	3595	16QAM	8.9505	9.7314	PASS
B42	10	High	43540	3595	64QAM	8.9809	9.6998	PASS
B42	10	High	43540	3595	256QAM	8.9485	9.8072	PASS
B42	15	Low	43165	3557.5	QPSK	13.425	14.492	PASS
B42	15	Low	43165	3557.5	16QAM	13.434	14.527	PASS
B42	15	Low	43165	3557.5	64QAM	13.409	14.621	PASS
B42	15	Low	43165	3557.5	256QAM	13.403	14.477	PASS
B42	15	Mid	43340	3575	QPSK	13.433	14.547	PASS
B42	15	Mid	43340	3575	16QAM	13.407	14.629	PASS
B42	15	Mid	43340	3575	64QAM	13.420	14.442	PASS
B42	15	Mid	43340	3575	256QAM	13.409	14.642	PASS
B42	15	High	43515	3592.5	QPSK	13.395	14.254	PASS



B42	15	High	43515	3592.5	16QAM	13.387	14.525	PASS
B42	15	High	43515	3592.5	64QAM	13.390	14.542	PASS
B42	15	High	43515	3592.5	256QAM	13.417	14.580	PASS
B42	20	Low	43190	3560	QPSK	17.851	19.241	PASS
B42	20	Low	43190	3560	16QAM	17.880	19.438	PASS
B42	20	Low	43190	3560	64QAM	17.864	19.173	PASS
B42	20	Low	43190	3560	256QAM	17.894	19.248	PASS
B42	20	Mid	43340	3575	QPSK	17.889	19.153	PASS
B42	20	Mid	43340	3575	16QAM	17.896	19.395	PASS
B42	20	Mid	43340	3575	64QAM	17.890	19.216	PASS
B42	20	Mid	43340	3575	256QAM	17.892	19.382	PASS
B42	20	High	43490	3590	QPSK	17.851	19.296	PASS
B42	20	High	43490	3590	16QAM	17.947	19.197	PASS
B42	20	High	43490	3590	64QAM	17.806	19.166	PASS
B42	20	High	43490	3590	256QAM	17.871	18.942	PASS



LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	99% BW (MHz)	26dB BW (MHz)	Verdict
B43	5	Low	43615	3602.5	QPSK	4.4627	4.9256	PASS
B43	5	Low	43615	3602.5	16QAM	4.4841	4.9076	PASS
B43	5	Low	43615	3602.5	64QAM	4.4734	4.9775	PASS
B43	5	Low	43615	3602.5	256QAM	4.5023	5.0428	PASS
B43	5	Mid	44090	3650	QPSK	4.4967	4.9099	PASS
B43	5	Mid	44090	3650	16QAM	4.4747	4.9994	PASS
B43	5	Mid	44090	3650	64QAM	4.4806	4.8296	PASS
B43	5	Mid	44090	3650	256QAM	4.4822	4.9585	PASS
B43	5	High	44565	3697.5	QPSK	4.4782	4.9941	PASS
B43	5	High	44565	3697.5	16QAM	4.4612	5.0332	PASS
B43	5	High	44565	3697.5	64QAM	4.4753	4.9516	PASS
B43	5	High	44565	3697.5	256QAM	4.4741	4.9538	PASS
B43	10	Low	43640	3605	QPSK	8.9520	9.6810	PASS
B43	10	Low	43640	3605	16QAM	8.9336	9.5532	PASS
B43	10	Low	43640	3605	64QAM	8.9389	9.7059	PASS
B43	10	Low	43640	3605	256QAM	8.9606	9.7169	PASS
B43	10	Mid	44090	3650	QPSK	8.9277	9.7890	PASS
B43	10	Mid	44090	3650	16QAM	8.9343	9.6854	PASS
B43	10	Mid	44090	3650	64QAM	8.9350	9.5217	PASS
B43	10	Mid	44090	3650	256QAM	8.8120	9.3157	PASS
B43	10	High	44540	3695	QPSK	8.9815	9.6083	PASS
B43	10	High	44540	3695	16QAM	8.9428	9.5892	PASS
B43	10	High	44540	3695	64QAM	8.9548	9.6044	PASS
B43	10	High	44540	3695	256QAM	8.9385	9.6318	PASS
B43	15	Low	43665	3607.5	QPSK	13.407	14.370	PASS
B43	15	Low	43665	3607.5	16QAM	13.377	14.294	PASS
B43	15	Low	43665	3607.5	64QAM	13.403	14.626	PASS
B43	15	Low	43665	3607.5	256QAM	13.384	14.295	PASS
B43	15	Mid	44090	3650	QPSK	13.393	14.218	PASS
B43	15	Mid	44090	3650	16QAM	13.410	14.515	PASS
B43	15	Mid	44090	3650	64QAM	13.416	14.278	PASS
B43	15	Mid	44090	3650	256QAM	13.350	14.030	PASS
B43	15	High	44515	3692.5	QPSK	13.440	14.283	PASS
B43	15	High	44515	3692.5	16QAM	13.397	14.491	PASS
B43	15	High	44515	3692.5	64QAM	13.415	14.483	PASS



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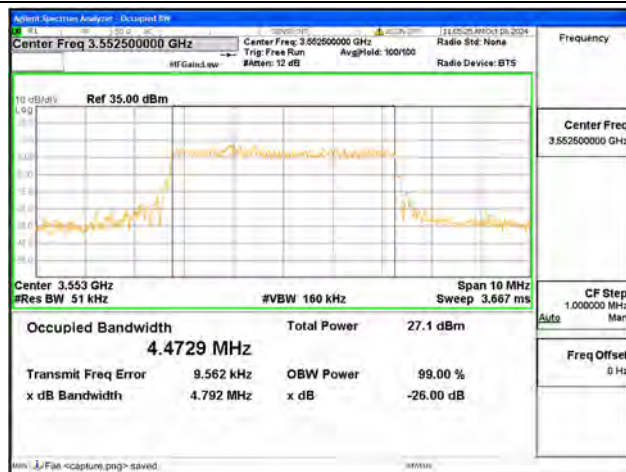
B43	15	High	44515	3692.5	256QAM	13.431	14.355	PASS
B43	20	Low	43690	3610	QPSK	17.938	18.858	PASS
B43	20	Low	43690	3610	16QAM	17.897	19.370	PASS
B43	20	Low	43690	3610	64QAM	17.860	19.145	PASS
B43	20	Low	43690	3610	256QAM	17.876	18.835	PASS
B43	20	Mid	44090	3650	QPSK	17.869	18.806	PASS
B43	20	Mid	44090	3650	16QAM	17.812	19.086	PASS
B43	20	Mid	44090	3650	64QAM	17.849	18.965	PASS
B43	20	Mid	44090	3650	256QAM	17.867	19.083	PASS
B43	20	High	44490	3690	QPSK	17.847	18.626	PASS
B43	20	High	44490	3690	16QAM	17.923	19.245	PASS
B43	20	High	44490	3690	64QAM	17.866	19.162	PASS
B43	20	High	44490	3690	256QAM	17.866	18.804	PASS



B42 / 5MHz / QPSK/ Low CH



B42 / 5MHz / 16QAM/ Low CH



B42 / 5MHz / 64QAM/ Low CH



B42 / 5MHz / 256QAM/ Low CH



B42 / 5MHz / QPSK/ Mid CH



B42 / 5MHz / 16QAM/ Mid CH



B42 / 5MHz / 64QAM/ Mid CH



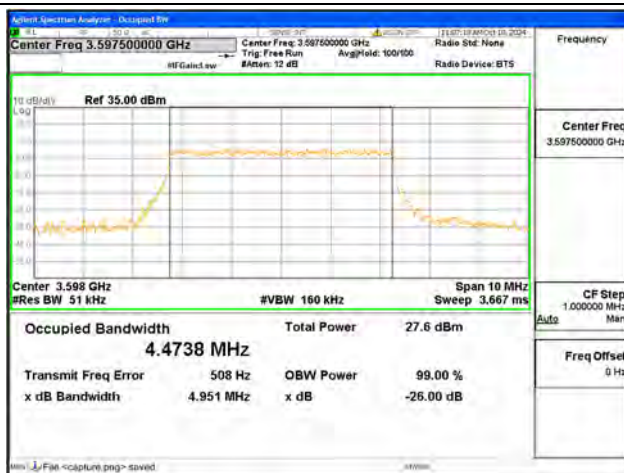
B42 / 5MHz / 256QAM/ Mid CH



B42 / 5MHz / QPSK/ High CH



B42 / 5MHz / 16QAM/ High CH



B42 / 5MHz / 64QAM/ High CH



B42 / 5MHz / 256QAM/ High CH



B42 / 10MHz / QPSK/ Low CH



B42 / 10MHz / 16QAM/ Low CH



B42 / 10MHz / 64QAM/ Low CH



B42 / 10MHz / 256QAM/ Low CH



B42 / 10MHz / QPSK/ Mid CH



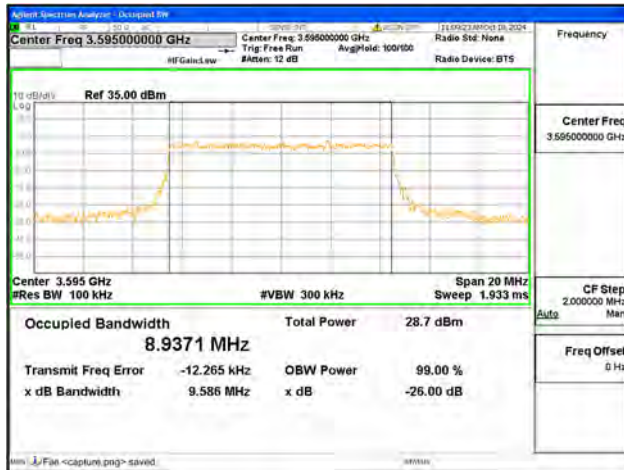
B42 / 10MHz / 16QAM/ Mid CH



B42 / 10MHz / 64QAM/ Mid CH



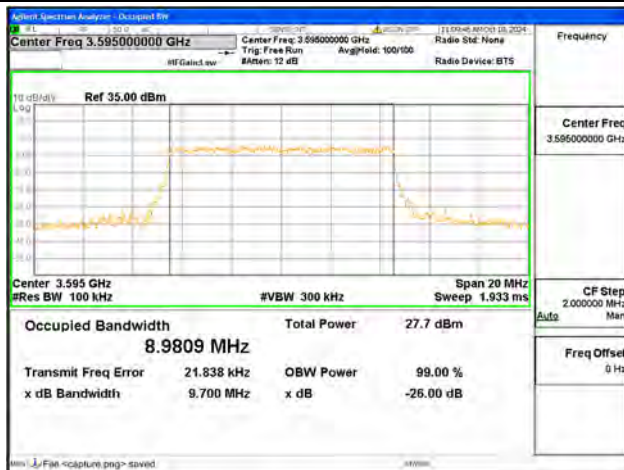
B42 / 10MHz / 256QAM/ Mid CH



B42 / 10MHz / QPSK/ High CH



B42 / 10MHz / 16QAM/ High CH



B42 / 10MHz / 64QAM/ High CH



B42 / 10MHz / 256QAM/ High CH



B42 / 15MHz / QPSK/ Low CH



B42 / 15MHz / 16QAM/ Low CH



B42 / 15MHz / 64QAM/ Low CH



B42 / 15MHz / 256QAM/ Low CH



B42 / 15MHz / QPSK/ Mid CH



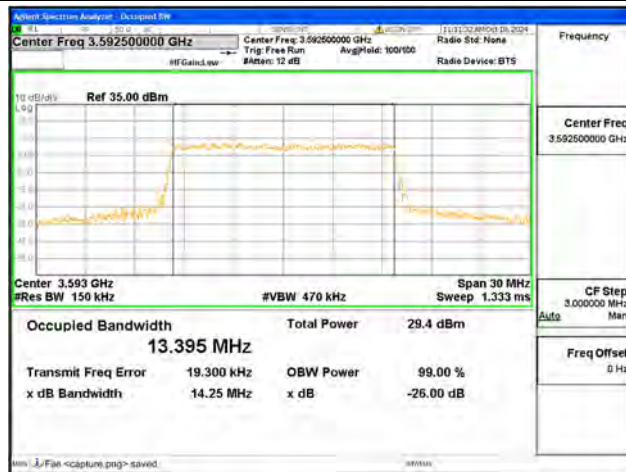
B42 / 15MHz / 16QAM/ Mid CH



B42 / 15MHz / 64QAM/ Mid CH



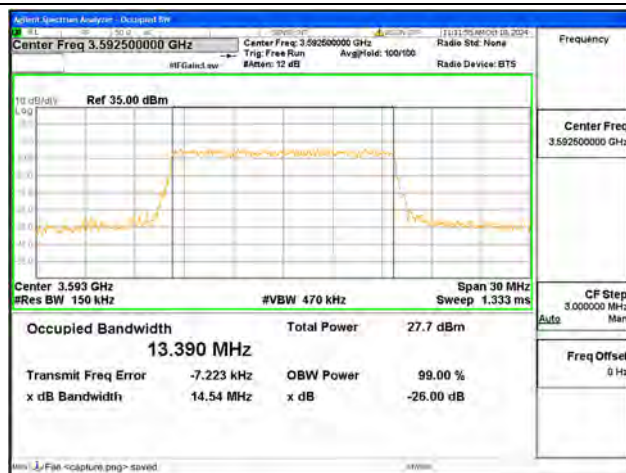
B42 / 15MHz / 256QAM/ Mid CH



B42 / 15MHz / QPSK/ High CH



B42 / 15MHz / 16QAM/ High CH



B42 / 15MHz / 64QAM/ High CH



B42 / 15MHz / 256QAM/ High CH



B42 / 20MHz / QPSK/ Low CH



B42 / 20MHz / 16QAM/ Low CH



B42 / 20MHz / 64QAM/ Low CH



B42 / 20MHz / 256QAM/ Low CH



B42 / 20MHz / QPSK/ Mid CH



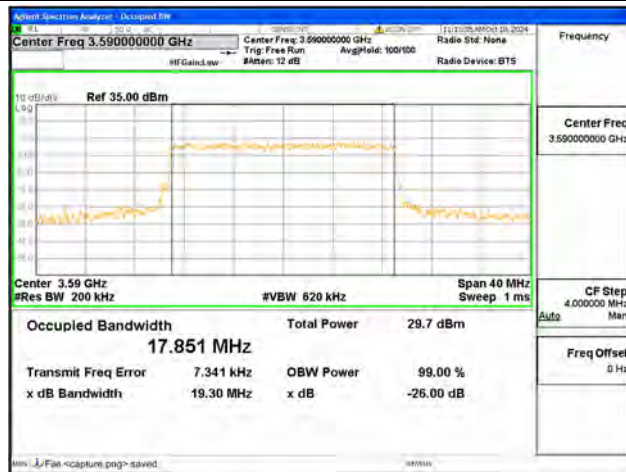
B42 / 20MHz / 16QAM/ Mid CH



B42 / 20MHz / 64QAM/ Mid CH



B42 / 20MHz / 256QAM/ Mid CH



B42 / 20MHz / QPSK/ High CH



B42 / 20MHz / 16QAM/ High CH



B42 / 20MHz / 64QAM/ High CH



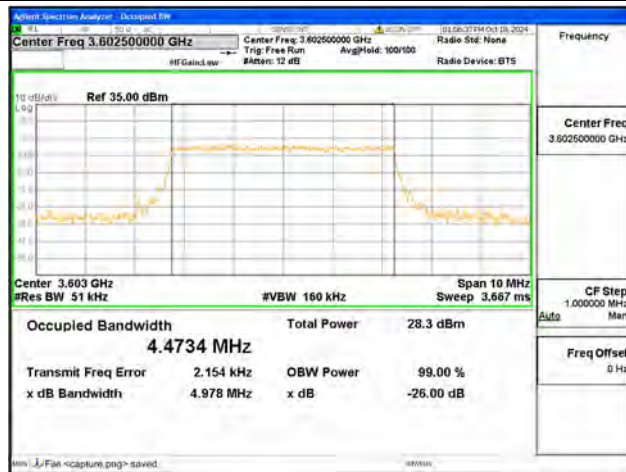
B42 / 20MHz / 256QAM/ High CH



B43 / 5MHz / QPSK/ Low CH



B43 / 5MHz / 16QAM/ Low CH



B43 / 5MHz / 64QAM/ Low CH



B43 / 5MHz / 256QAM/ Low CH



B43 / 5MHz / QPSK/ Mid CH



B43 / 5MHz / 16QAM/ Mid CH





B43 / 10MHz / QPSK/ Low CH



B43 / 10MHz / 16QAM/ Low CH



B43 / 10MHz / 64QAM/ Low CH



B43 / 10MHz / 256QAM/ Low CH



B43 / 10MHz / QPSK/ Mid CH



B43 / 10MHz / 16QAM/ Mid CH



B43 / 10MHz / 64QAM/ Mid CH



B43 / 10MHz / 256QAM/ Mid CH



B43 / 10MHz / QPSK/ High CH



B43 / 10MHz / 16QAM/ High CH



B43 / 10MHz / 64QAM/ High CH



B43 / 10MHz / 256QAM/ High CH



B43 / 15MHz / QPSK/ Low CH



B43 / 15MHz / 16QAM/ Low CH



B43 / 15MHz / 64QAM/ Low CH



B43 / 15MHz / 256QAM/ Low CH



B43 / 15MHz / QPSK/ Mid CH



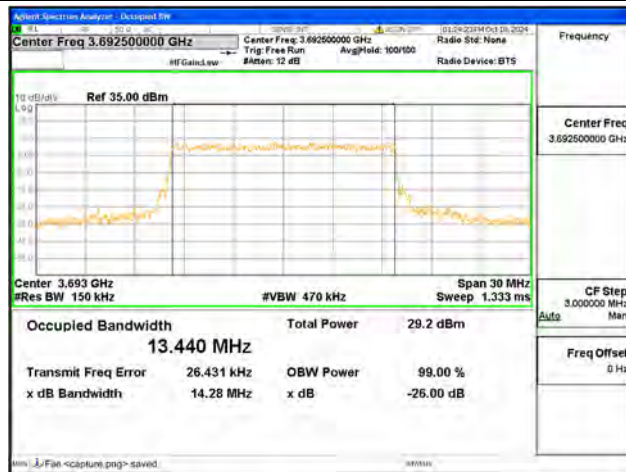
B43 / 15MHz / 16QAM/ Mid CH



B43 / 15MHz / 64QAM/ Mid CH



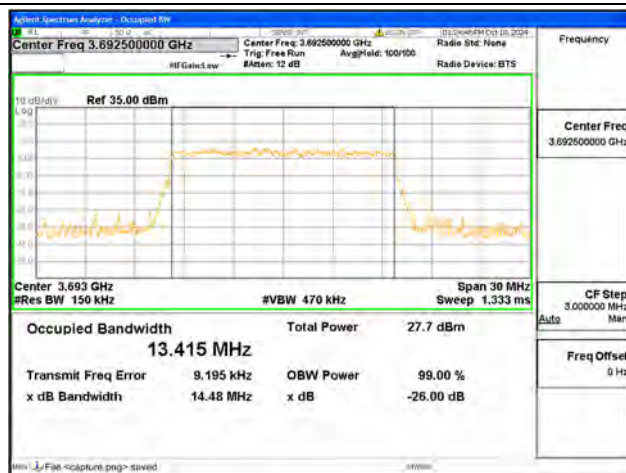
B43 / 15MHz / 256QAM/ Mid CH



B43 / 15MHz / QPSK/ High CH



B43 / 15MHz / 16QAM/ High CH



B43 / 15MHz / 64QAM/ High CH



B43 / 15MHz / 256QAM/ High CH



B43 / 20MHz / QPSK/ Low CH



B43 / 20MHz / 16QAM/ Low CH



B43 / 20MHz / 64QAM/ Low CH



B43 / 20MHz / 256QAM/ Low CH



B43 / 20MHz / QPSK/ Mid CH



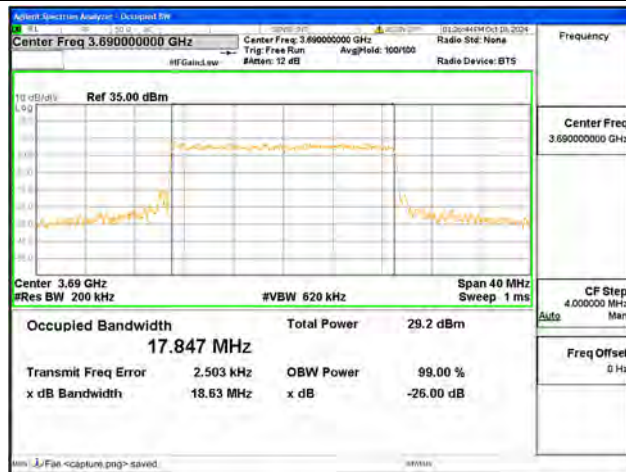
B43 / 20MHz / 16QAM/ Mid CH



B43 / 20MHz / 64QAM/ Mid CH



B43 / 20MHz / 256QAM/ Mid CH



B43 / 20MHz / QPSK/ High CH



B43 / 20MHz / 16QAM/ High CH



B43 / 20MHz / 64QAM/ High CH



B43 / 20MHz / 256QAM/ High CH

2.3. Frequency Stability

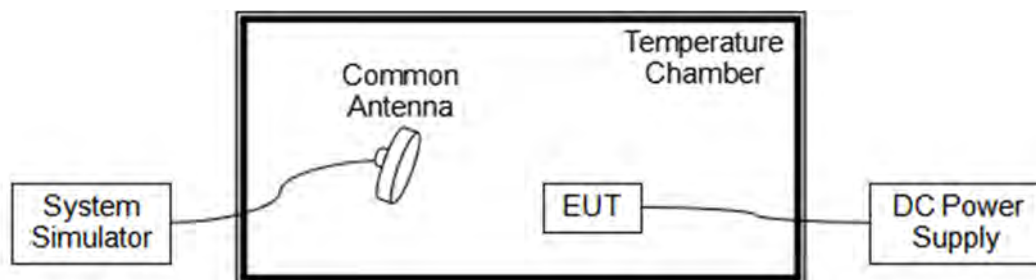
2.3.1. Requirement

According to FCC section 2.1055 & 90.213, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°C .
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Note: The operating temperature of EUT is from -10°C to 45°C , which are specified by the applicant.

2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

2.3.3. Test procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.



2.3.4. Test Result

The nominal, highest and lowest extreme voltages are separately 12.0V, 13.2V and 10.8V, which are specified by the applicant; the normal temperature here used is 20°C.

LTE Band 42, 256QAM, Channel 52490, Frequency 3500.0MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	12.0	+20(Ref)	15	0.004	PASS
Normal		-10	1	0.000	
Normal		0	18	0.005	
Normal		+10	-19	-0.005	
Normal		+20	-14	-0.004	
Normal		+30	17	0.005	
Normal		+40	13	0.004	
Normal		+45	2	0.001	
High	13.2	+20	15	0.004	
BATT.ENDPOINT	10.8	+20	17	0.005	

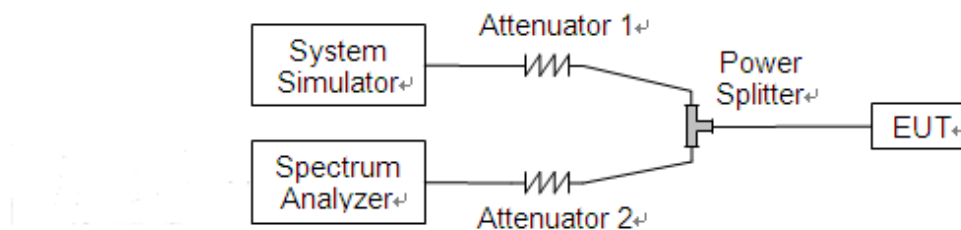
LTE Band 43, 256QAM, Channel 45090, Frequency 3750MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
Normal	12.0	+20(Ref)	-11	-0.003	PASS
Normal		-10	14	0.004	
Normal		0	20	0.005	
Normal		+10	21	0.006	
Normal		+20	-23	-0.006	
Normal		+30	-5	-0.001	
Normal		+40	18	0.005	
Normal		+45	18	0.005	
High	13.2	+20	-3	-0.001	
BATT.ENDPOINT	10.8	+20	18	0.005	

2.4. Peak to Average Radio

2.4.1. Requirement

According to FCC 96.41(g), the peak-to-average power ratio (PAPR) of any CBSD transmitter output power must not exceed 13 dB.

2.4.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.4.3. Test procedure

KDB 971168 D01v03 Section 5.7 and ANSI/TIA-603-E-2016.

**2.4.4. Test Result**

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B42	5	Low	43115	3552.5	QPSK	5.43	PASS
B42	5	Low	43115	3552.5	16QAM	6.27	PASS
B42	5	Low	43115	3552.5	64QAM	6.68	PASS
B42	5	Low	43115	3552.5	256QAM	6.91	PASS
B42	5	Mid	43340	3575	QPSK	5.44	PASS
B42	5	Mid	43340	3575	16QAM	6.34	PASS
B42	5	Mid	43340	3575	64QAM	6.76	PASS
B42	5	Mid	43340	3575	256QAM	6.88	PASS
B42	5	High	43565	3597.5	QPSK	5.43	PASS
B42	5	High	43565	3597.5	16QAM	6.28	PASS
B42	5	High	43565	3597.5	64QAM	6.73	PASS
B42	5	High	43565	3597.5	256QAM	6.93	PASS
B42	10	Low	43140	3555	QPSK	5.47	PASS
B42	10	Low	43140	3555	16QAM	6.30	PASS
B42	10	Low	43140	3555	64QAM	6.68	PASS
B42	10	Low	43140	3555	256QAM	6.85	PASS
B42	10	Mid	43340	3575	QPSK	5.47	PASS
B42	10	Mid	43340	3575	16QAM	6.28	PASS
B42	10	Mid	43340	3575	64QAM	6.68	PASS
B42	10	Mid	43340	3575	256QAM	6.82	PASS
B42	10	High	43540	3595	QPSK	5.47	PASS
B42	10	High	43540	3595	16QAM	6.30	PASS
B42	10	High	43540	3595	64QAM	6.69	PASS
B42	10	High	43540	3595	256QAM	6.82	PASS
B42	15	Low	43165	3557.5	QPSK	5.27	PASS
B42	15	Low	43165	3557.5	16QAM	6.17	PASS
B42	15	Low	43165	3557.5	64QAM	6.66	PASS
B42	15	Low	43165	3557.5	256QAM	6.83	PASS
B42	15	Mid	43340	3575	QPSK	5.28	PASS
B42	15	Mid	43340	3575	16QAM	6.16	PASS
B42	15	Mid	43340	3575	64QAM	6.66	PASS
B42	15	Mid	43340	3575	256QAM	6.79	PASS
B42	15	High	43515	3592.5	QPSK	5.28	PASS



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B42	15	High	43515	3592.5	16QAM	6.17	PASS
B42	15	High	43515	3592.5	64QAM	6.61	PASS
B42	15	High	43515	3592.5	256QAM	6.79	PASS
B42	20	Low	43190	3560	QPSK	5.38	PASS
B42	20	Low	43190	3560	16QAM	6.24	PASS
B42	20	Low	43190	3560	64QAM	6.61	PASS
B42	20	Low	43190	3560	256QAM	6.83	PASS
B42	20	Mid	43340	3575	QPSK	5.38	PASS
B42	20	Mid	43340	3575	16QAM	6.26	PASS
B42	20	Mid	43340	3575	64QAM	6.64	PASS
B42	20	Mid	43340	3575	256QAM	6.81	PASS
B42	20	High	43490	3590	QPSK	5.36	PASS
B42	20	High	43490	3590	16QAM	6.25	PASS
B42	20	High	43490	3590	64QAM	6.69	PASS
B42	20	High	43490	3590	256QAM	6.77	PASS



LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B43	5	Low	43615	3602.5	QPSK	5.53	PASS
B43	5	Low	43615	3602.5	16QAM	6.35	PASS
B43	5	Low	43615	3602.5	64QAM	6.81	PASS
B43	5	Low	43615	3602.5	256QAM	6.92	PASS
B43	5	Mid	44090	3650	QPSK	5.46	PASS
B43	5	Mid	44090	3650	16QAM	6.33	PASS
B43	5	Mid	44090	3650	64QAM	6.74	PASS
B43	5	Mid	44090	3650	256QAM	7.01	PASS
B43	5	High	44565	3697.5	QPSK	5.54	PASS
B43	5	High	44565	3697.5	16QAM	6.33	PASS
B43	5	High	44565	3697.5	64QAM	6.82	PASS
B43	5	High	44565	3697.5	256QAM	6.99	PASS
B43	10	Low	43640	3605	QPSK	5.53	PASS
B43	10	Low	43640	3605	16QAM	6.35	PASS
B43	10	Low	43640	3605	64QAM	6.74	PASS
B43	10	Low	43640	3605	256QAM	6.86	PASS
B43	10	Mid	44090	3650	QPSK	5.52	PASS
B43	10	Mid	44090	3650	16QAM	6.33	PASS
B43	10	Mid	44090	3650	64QAM	6.72	PASS
B43	10	Mid	44090	3650	256QAM	6.90	PASS
B43	10	High	44540	3695	QPSK	5.49	PASS
B43	10	High	44540	3695	16QAM	6.31	PASS
B43	10	High	44540	3695	64QAM	6.69	PASS
B43	10	High	44540	3695	256QAM	6.87	PASS
B43	15	Low	43665	3607.5	QPSK	5.41	PASS
B43	15	Low	43665	3607.5	16QAM	6.27	PASS
B43	15	Low	43665	3607.5	64QAM	6.71	PASS
B43	15	Low	43665	3607.5	256QAM	6.94	PASS
B43	15	Mid	44090	3650	QPSK	5.41	PASS
B43	15	Mid	44090	3650	16QAM	6.26	PASS
B43	15	Mid	44090	3650	64QAM	6.71	PASS
B43	15	Mid	44090	3650	256QAM	6.90	PASS
B43	15	High	44515	3692.5	QPSK	5.37	PASS
B43	15	High	44515	3692.5	16QAM	6.23	PASS
B43	15	High	44515	3692.5	64QAM	6.71	PASS



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B43	15	High	44515	3692.5	256QAM	6.89	PASS
B43	20	Low	43690	3610	QPSK	5.50	PASS
B43	20	Low	43690	3610	16QAM	6.29	PASS
B43	20	Low	43690	3610	64QAM	6.68	PASS
B43	20	Low	43690	3610	256QAM	6.89	PASS
B43	20	Mid	44090	3650	QPSK	5.44	PASS
B43	20	Mid	44090	3650	16QAM	6.32	PASS
B43	20	Mid	44090	3650	64QAM	6.69	PASS
B43	20	Mid	44090	3650	256QAM	6.90	PASS
B43	20	High	44490	3690	QPSK	5.45	PASS
B43	20	High	44490	3690	16QAM	6.31	PASS
B43	20	High	44490	3690	64QAM	6.67	PASS
B43	20	High	44490	3690	256QAM	6.90	PASS



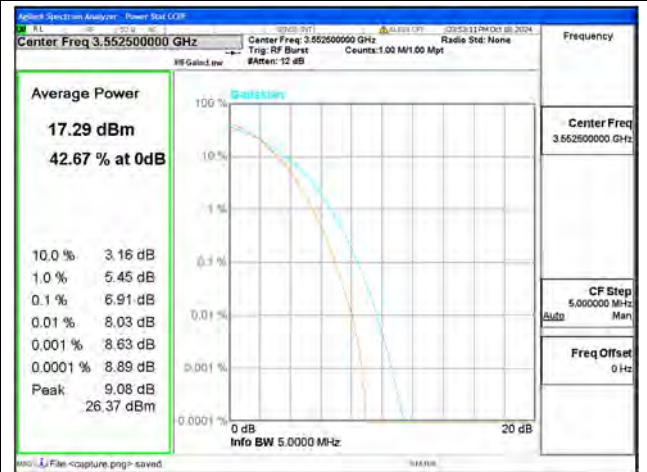
B42 / 5MHz / Low CH / QPSK



B42 / 5MHz / Low CH / 16QAM



B42 / 5MHz / Low CH / 64QAM



B42 / 5MHz / Low CH / 256QAM



B42 / 5MHz / Mid CH / QPSK



B42 / 5MHz / Mid CH / 16QAM



B42 / 5MHz / Mid CH / 64QAM



B42 / 5MHz / Mid CH / 256QAM



B42 / 5MHz / High CH / QPSK



B42 / 5MHz / High CH / 16QAM



B42 / 5MHz / High CH / 64QAM



B42 / 5MHz / High CH / 256QAM



B42 / 10MHz / Low CH / QPSK



B42 / 10MHz / Low CH / 16QAM



B42 / 10MHz / Low CH / 64QAM



B42 / 10MHz / Low CH / 256QAM



B42 / 10MHz / Mid CH / QPSK



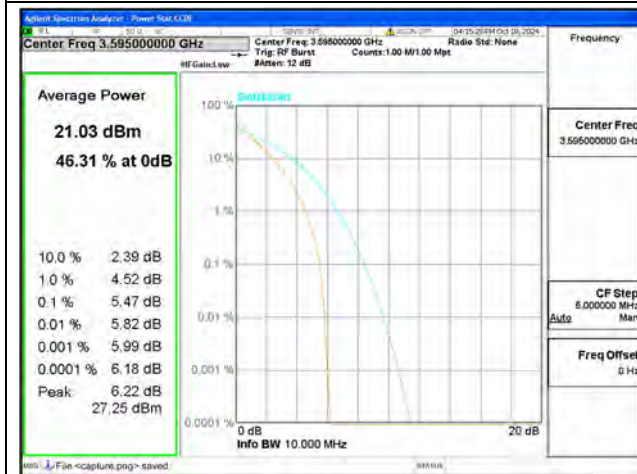
B42 / 10MHz / Mid CH / 16QAM



B42 / 10MHz / Mid CH / 64QAM



B42 / 10MHz / Mid CH / 256QAM



B42 / 10MHz / High CH / QPSK



B42 / 10MHz / High CH / 16QAM



B42 / 10MHz / High CH / 64QAM



B42 / 10MHz / High CH / 256QAM



B42 / 15MHz / Low CH / QPSK



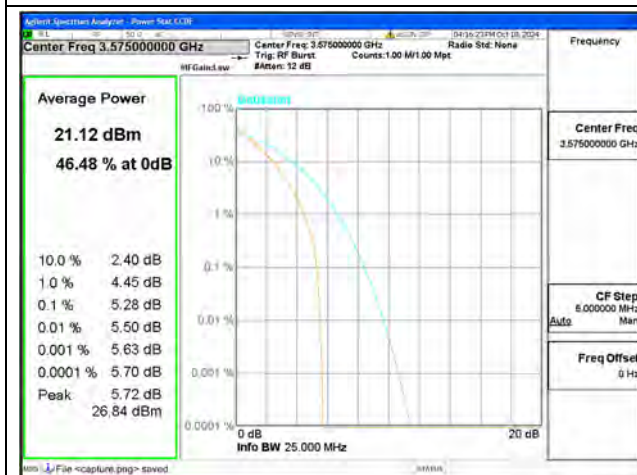
B42 / 15MHz / Low CH / 16QAM



B42 / 15MHz / Low CH / 64QAM



B42 / 15MHz / Low CH / 256QAM



B42 / 15MHz / Mid CH / QPSK



B42 / 15MHz / Mid CH / 16QAM



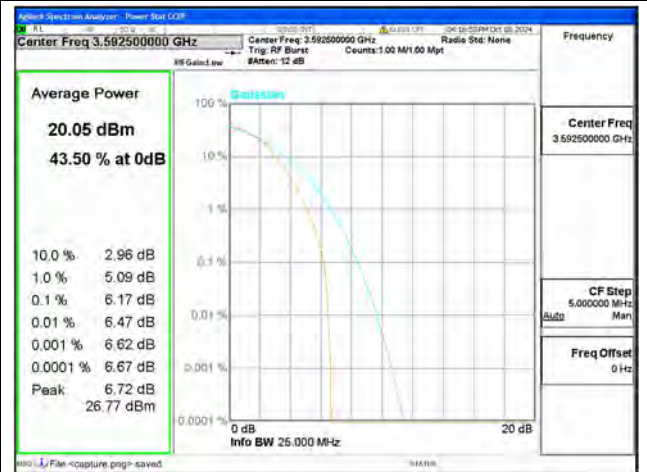
B42 / 15MHz / Mid CH / 64QAM



B42 / 15MHz / Mid CH / 256QAM



B42 / 15MHz / High CH / QPSK



B42 / 15MHz / High CH / 16QAM



B42 / 15MHz / High CH / 64QAM



B42 / 15MHz / High CH / 256QAM



B42 / 20MHz / Low CH / QPSK



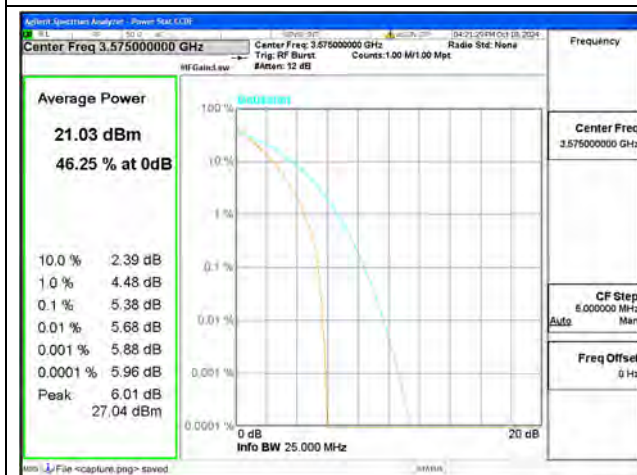
B42 / 20MHz / Low CH / 16QAM



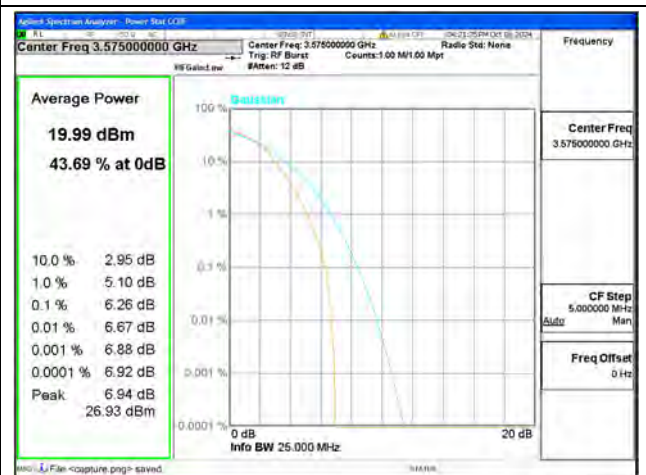
B42 / 20MHz / Low CH / 64QAM



B42 / 20MHz / Low CH / 256QAM



B42 / 20MHz / Mid CH / QPSK



B42 / 20MHz / Mid CH / 16QAM



B42 / 20MHz / Mid CH / 64QAM



B42 / 20MHz / Mid CH / 256QAM



B42 / 20MHz / High CH / QPSK



B42 / 20MHz / High CH / 16QAM



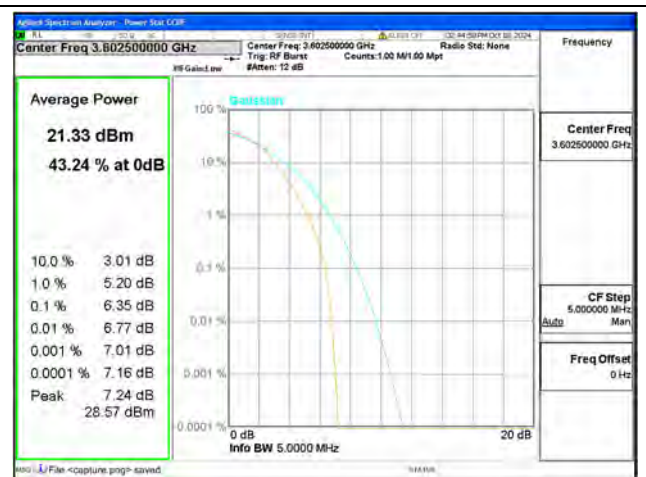
B42 / 20MHz / High CH / 64QAM



B42 / 20MHz / High CH / 256QAM



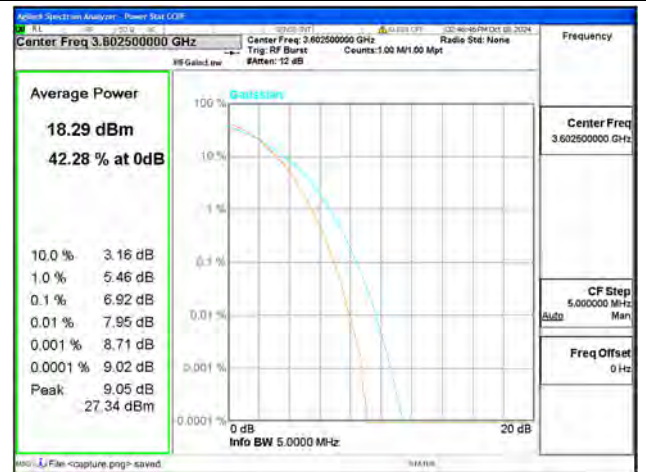
B43 / 5MHz / Low CH / QPSK



B43 / 5MHz / Low CH / 16QAM



B43 / 5MHz / Low CH / 64QAM



B43 / 5MHz / Low CH / 256QAM



B43 / 5MHz / Mid CH / QPSK



B43 / 5MHz / Mid CH / 16QAM



B43 / 5MHz / Mid CH / 64QAM



B43 / 5MHz / Mid CH / 256QAM



B43 / 5MHz / High CH / QPSK



B43 / 5MHz / High CH / 16QAM



B43 / 5MHz / High CH / 64QAM



B43 / 5MHz / High CH / 256QAM



B43 / 10MHz / Low CH / QPSK



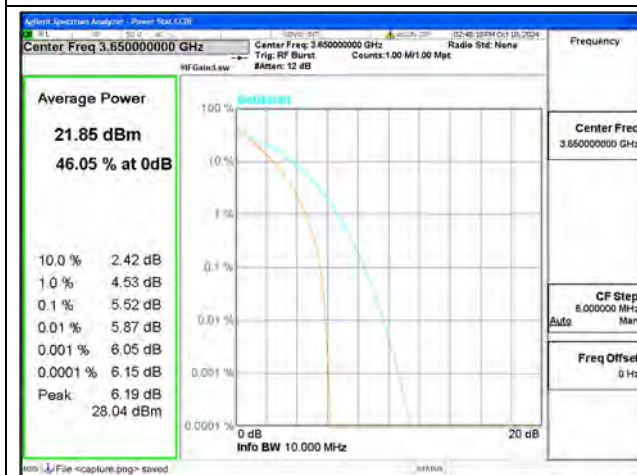
B43 / 10MHz / Low CH / 16QAM



B43 / 10MHz / Low CH / 64QAM



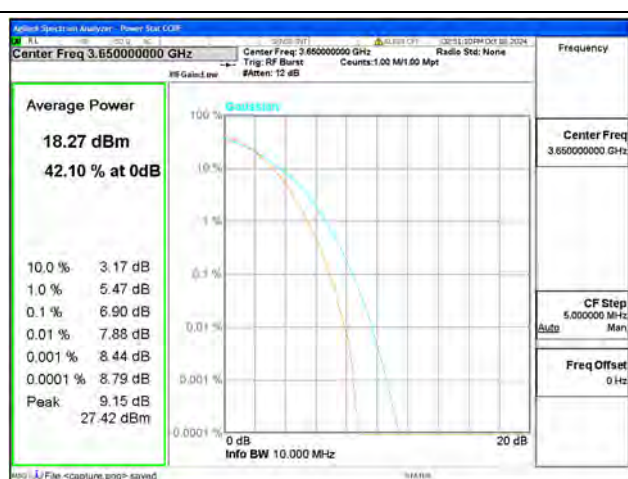
B43 / 10MHz / Low CH / 256QAM



B43 / 10MHz / Mid CH / QPSK



B43 / 10MHz / Mid CH / 16QAM





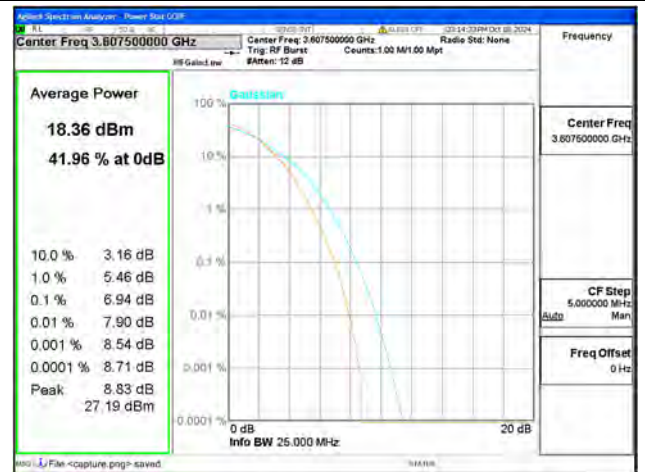
B43 / 15MHz / Low CH / QPSK



B43 / 15MHz / Low CH / 16QAM



B43 / 15MHz / Low CH / 64QAM



B43 / 15MHz / Low CH / 256QAM



B43 / 15MHz / Mid CH / QPSK



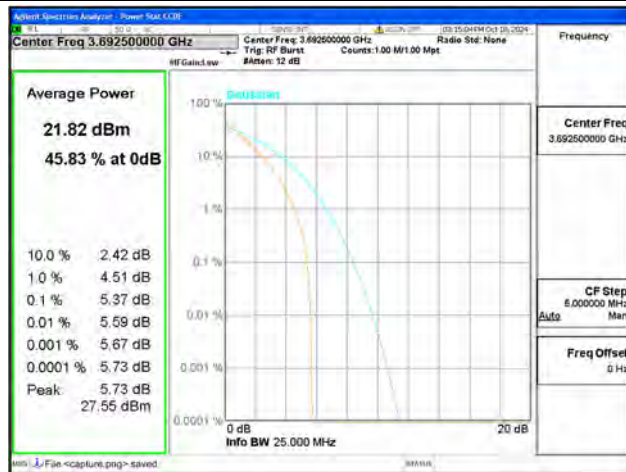
B43 / 15MHz / Mid CH / 16QAM



B43 / 15MHz / Mid CH / 64QAM



B43 / 15MHz / Mid CH / 256QAM



B43 / 15MHz / High CH / QPSK



B43 / 15MHz / High CH / 16QAM



B43 / 15MHz / High CH / 64QAM



B43 / 15MHz / High CH / 256QAM



B43 / 20MHz / Low CH / QPSK



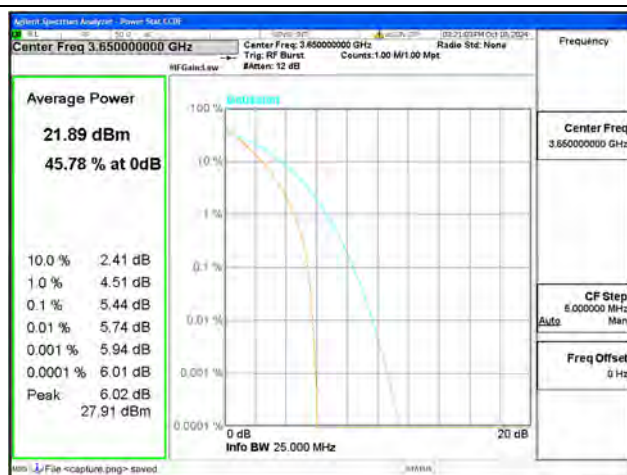
B43 / 20MHz / Low CH / 16QAM



B43 / 20MHz / Low CH / 64QAM



B43 / 20MHz / Low CH / 256QAM



B43 / 20MHz / Mid CH / QPSK



B43 / 20MHz / Mid CH / 16QAM



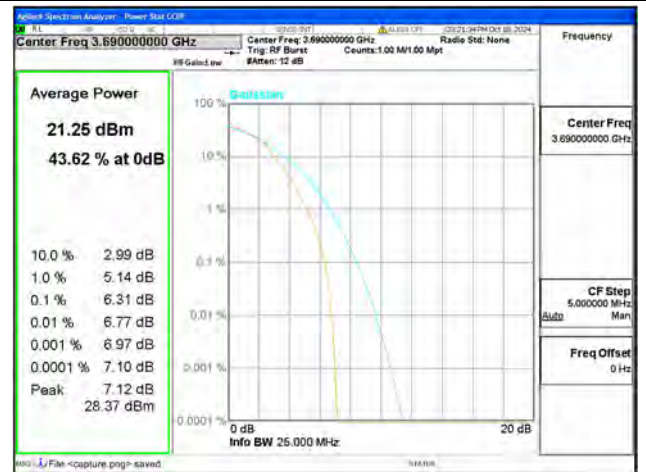
B43 / 20MHz / Mid CH / 64QAM



B43 / 20MHz / Mid CH / 256QAM



B43 / 20MHz / High CH / QPSK



B43 / 20MHz / High CH / 16QAM



B43 / 20MHz / High CH / 64QAM



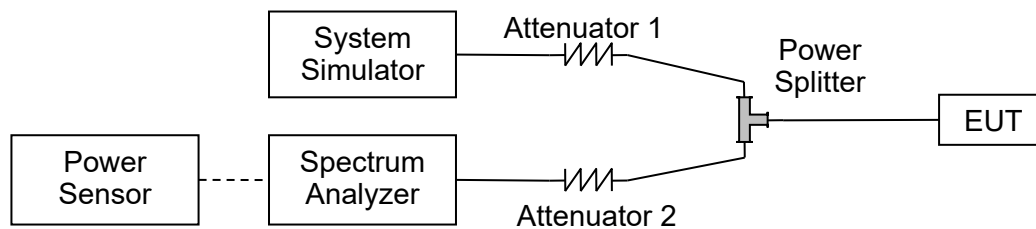
B43 / 20MHz / High CH / 256QAM

2.5. Conducted Spurious Emissions

2.5.1. Requirement

According to FCC section 96.41(e), the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz .

2.5.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

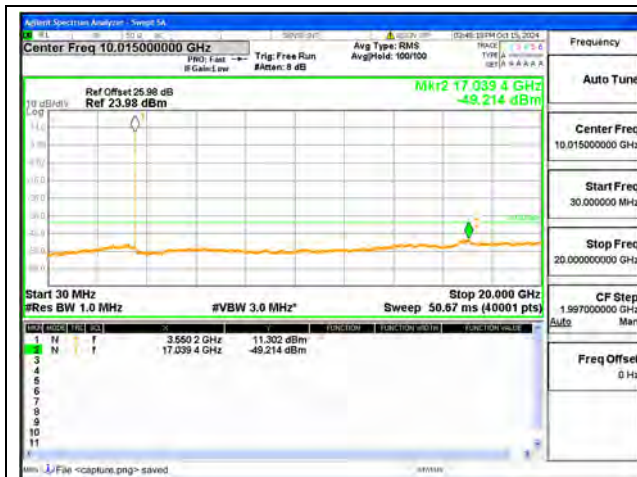
2.5.1. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

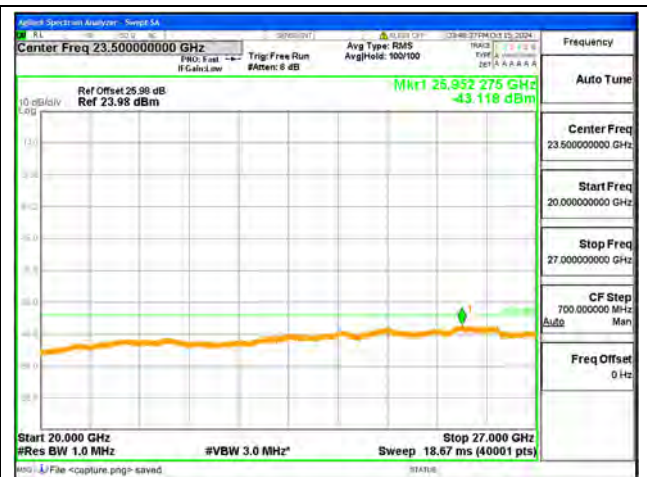


2.5.2. Test Result

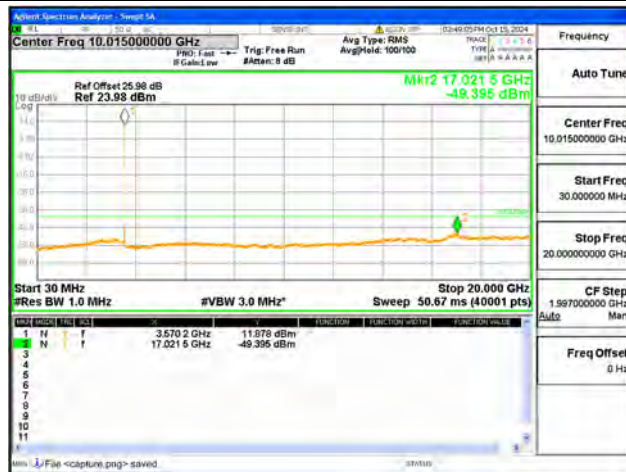




B42-30M-20G / 10MHz / Low CH / QPSK



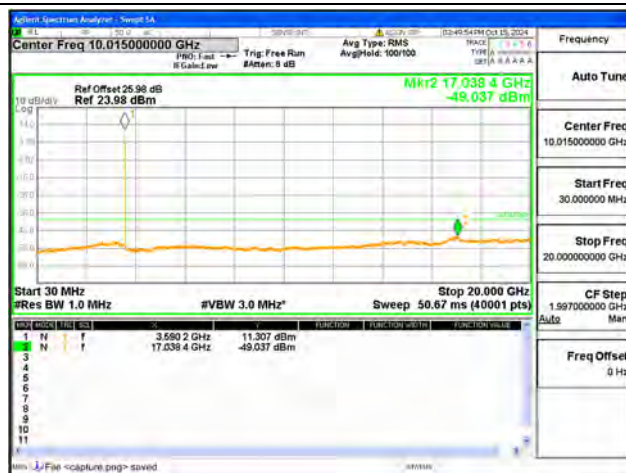
B42-20G-36G / 10MHz / Low CH / QPSK



B42-30M-20G / 10MHz / Mid CH / QPSK



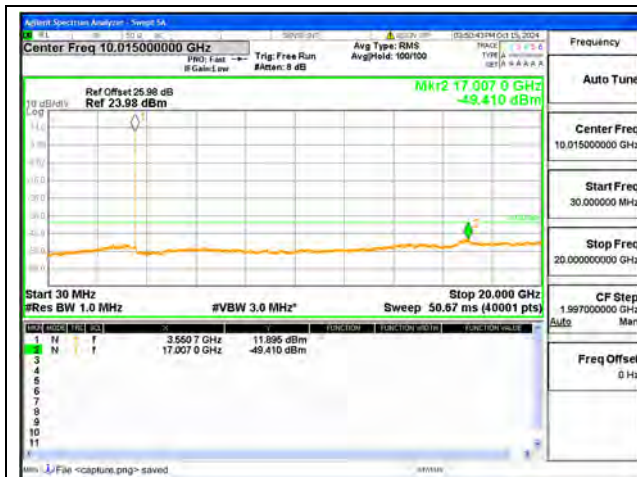
B42-20G-36G / 10MHz / Mid CH / QPSK



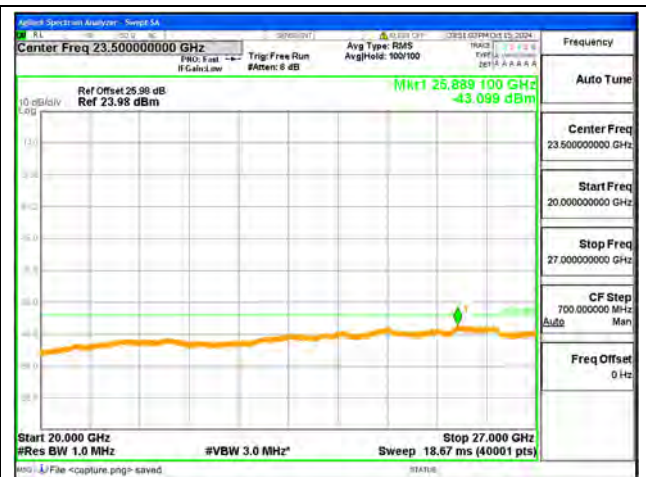
B42-30M-20G / 10MHz / High CH / QPSK



B42-20G-36G / 10MHz / High CH / QPSK



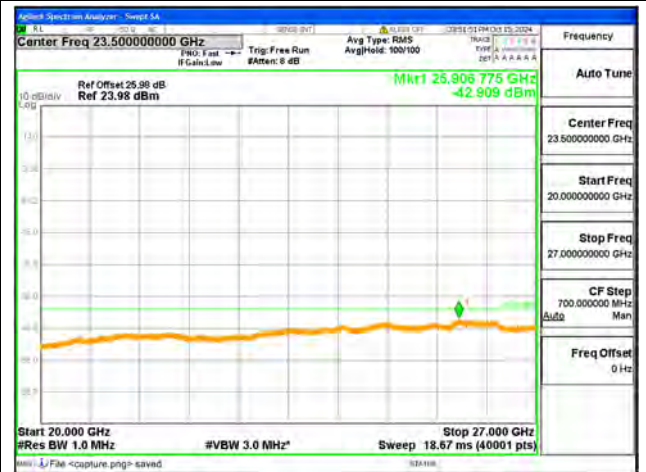
B42-30M-20G / 15MHz / Low CH / QPSK



B42-20G-36G / 15MHz / Low CH / QPSK



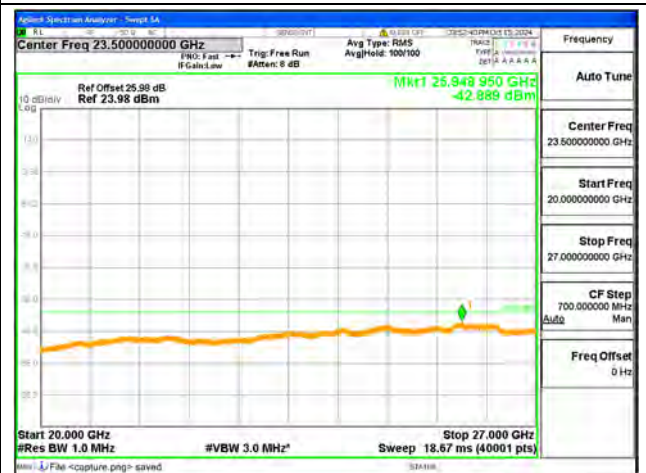
B42-30M-20G / 15MHz / Mid CH / QPSK



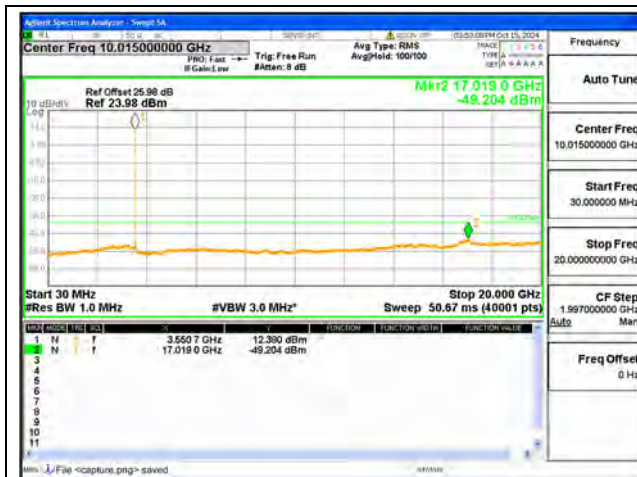
B42-20G-36G / 15MHz / Mid CH / QPSK



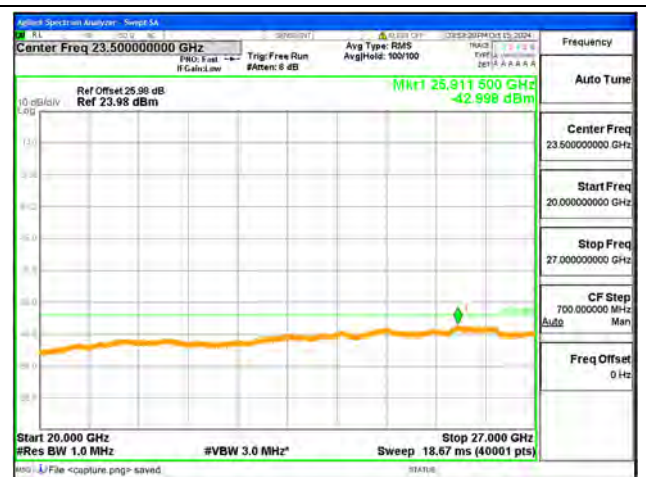
B42-30M-20G / 15MHz / High CH / QPSK



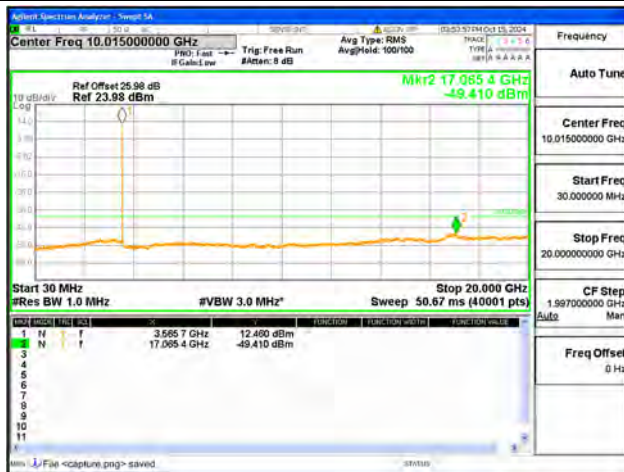
B42-20G-36G / 15MHz / High CH / QPSK



B42-30M-20G / 20MHz / Low CH / QPSK



B42-20G-36G / 20MHz / Low CH / QPSK



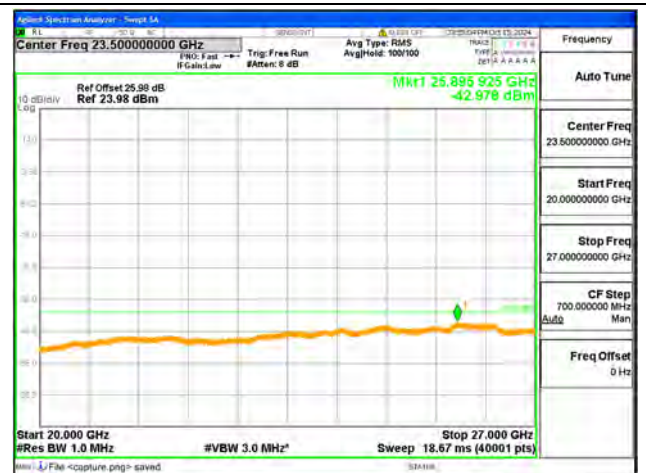
B42-30M-20G / 20MHz / Mid CH / QPSK



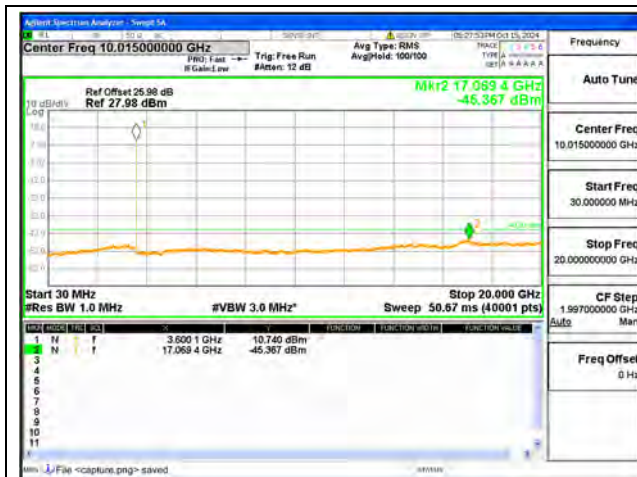
B42-20G-36G / 20MHz / Mid CH / QPSK



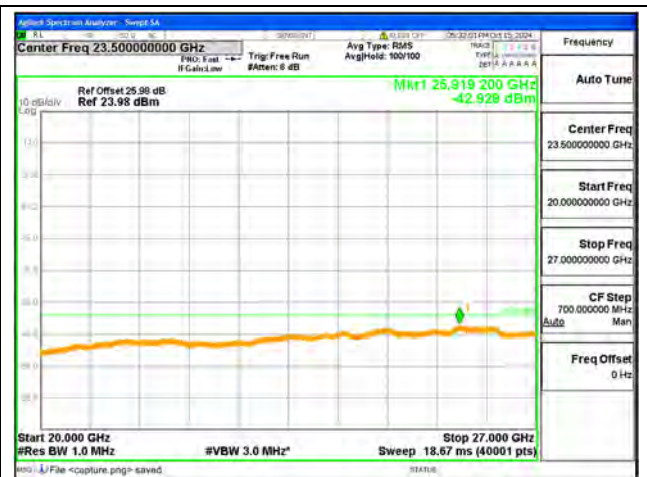
B42-30M-20G / 20MHz / High CH / QPSK



B42-20G-36G / 20MHz / High CH / QPSK



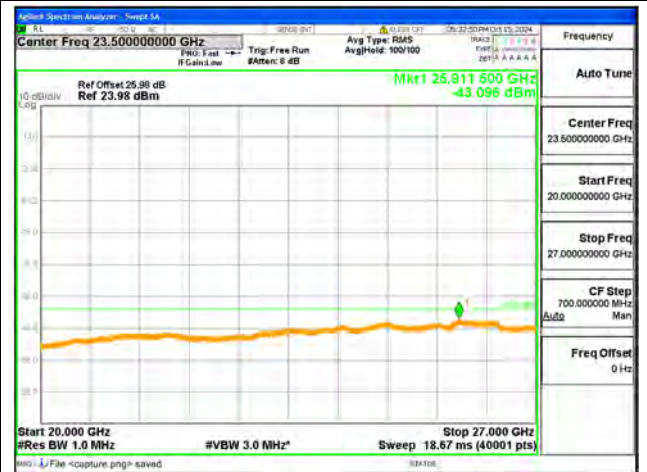
B43-30M-20G / 5MHz / Low CH / QPSK



B43-20G-36G / 5MHz / Low CH / QPSK



B43-30M-20G / 5MHz / Mid CH / QPSK



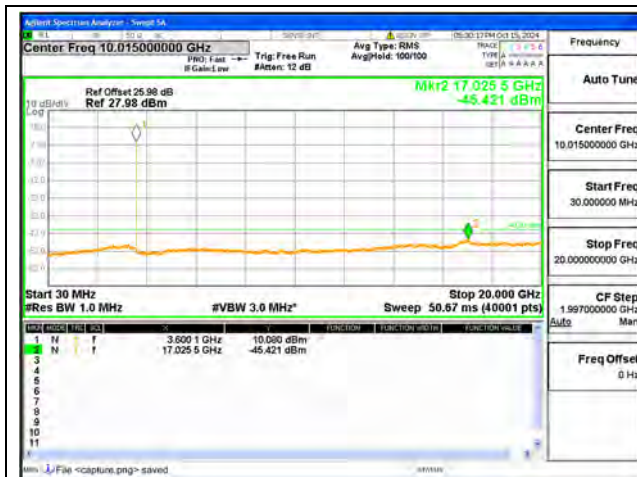
B43-20G-36G / 5MHz / Mid CH / QPSK



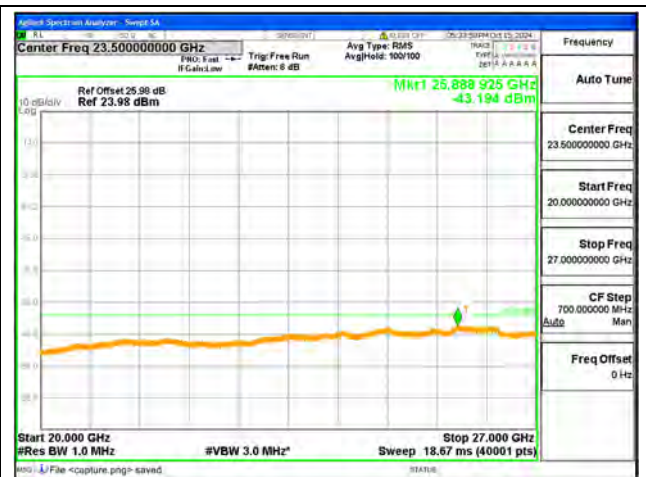
B43-30M-20G / 5MHz / High CH / QPSK



B43-20G-36G / 5MHz / High CH / QPSK



B43-30M-20G / 10MHz / Low CH / QPSK



B43-20G-36G / 10MHz / Low CH / QPSK



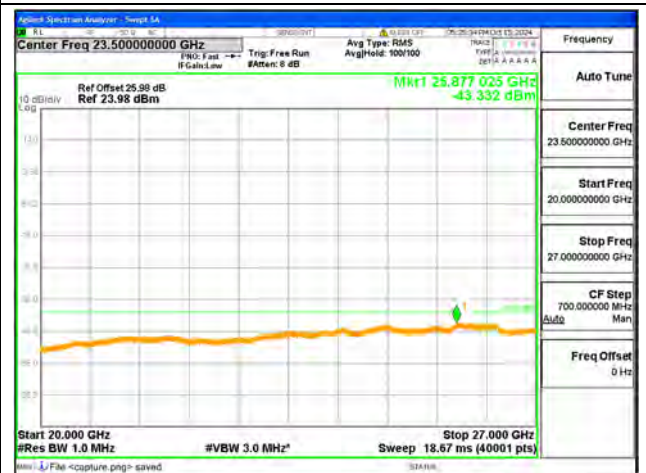
B43-30M-20G / 10MHz / Mid CH / QPSK



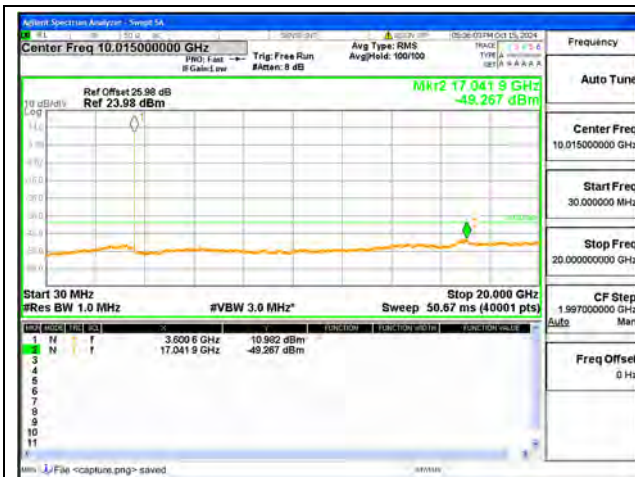
B43-20G-36G / 10MHz / Mid CH / QPSK



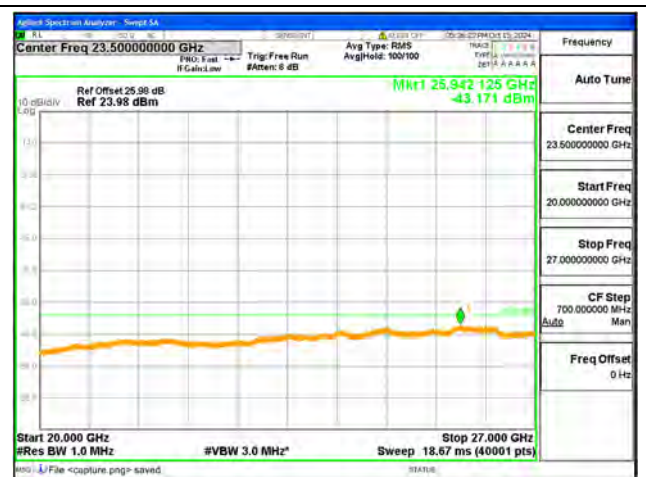
B43-30M-20G / 10MHz / High CH / QPSK



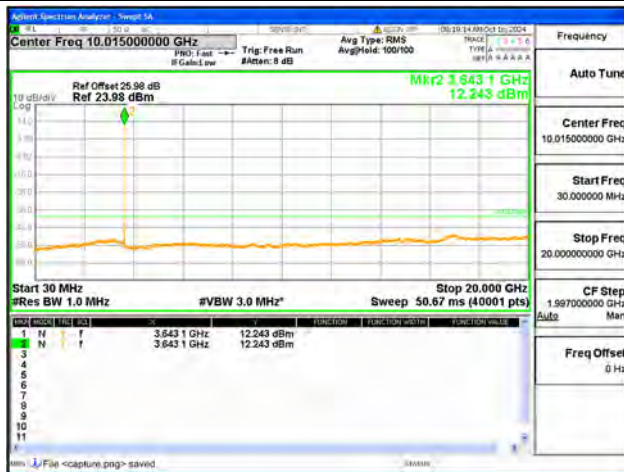
B43-20G-36G / 10MHz / High CH / QPSK



B43-30M-20G / 15MHz / Low CH / QPSK



B43-20G-36G / 15MHz / Low CH / QPSK



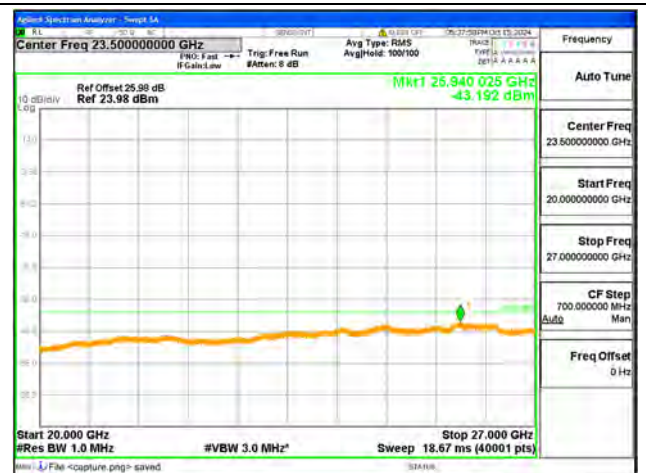
B43-30M-20G / 15MHz / Mid CH / QPSK



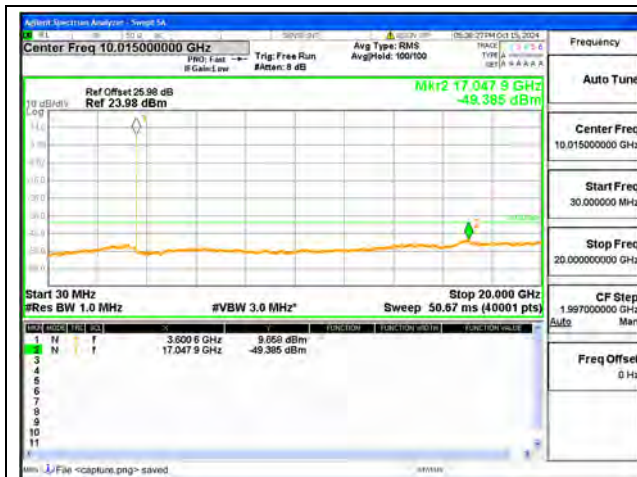
B43-20G-36G / 15MHz / Mid CH / QPSK



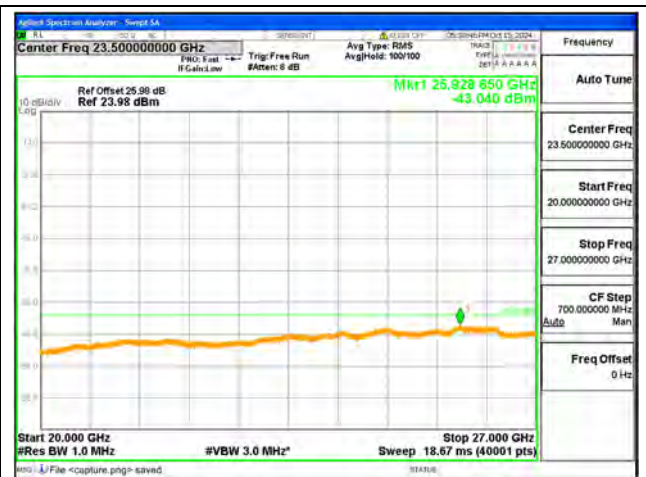
B43-30M-20G / 15MHz / High CH / QPSK



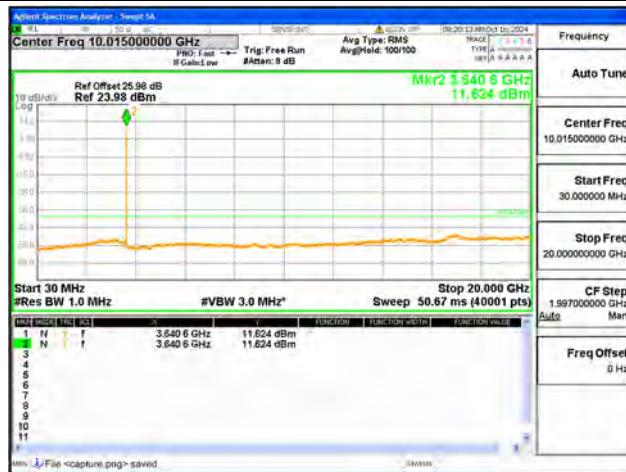
B43-20G-36G / 15MHz / High CH / QPSK



B43-30M-20G / 20MHz / Low CH / QPSK



B43-20G-36G / 20MHz / Low CH / QPSK



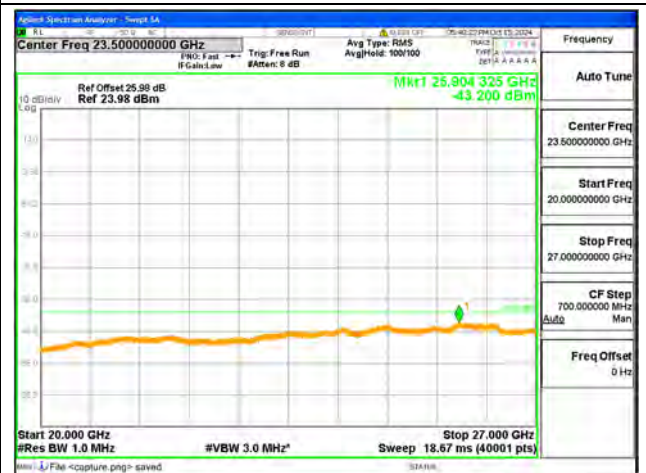
B43-30M-20G / 20MHz / Mid CH / QPSK



B43-20G-36G / 20MHz / Mid CH / QPSK



B43-30M-20G / 20MHz / High CH / QPSK



B43-20G-36G / 20MHz / High CH / QPSK



2.6. Band Edge

2.6.1. Requirement

Part 96.41(e)(1)(i)

For channel and frequency assignments made by the SAS to CBSDs, the conducted power of any CBSD emission outside the fundamental emission bandwidth as specified in paragraph (e)(3) of this section (whether the emission is inside or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any CBSD emission shall not exceed -25 dBm/MHz.

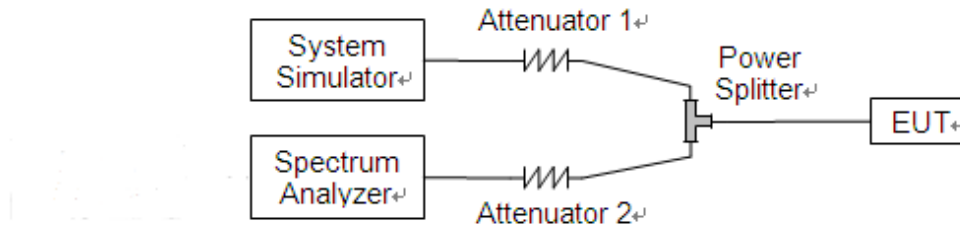
Part 96.41(e)(1)(ii)

For channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz.

Part 96.41(e)(2)

For CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

2.6.2. Test Description



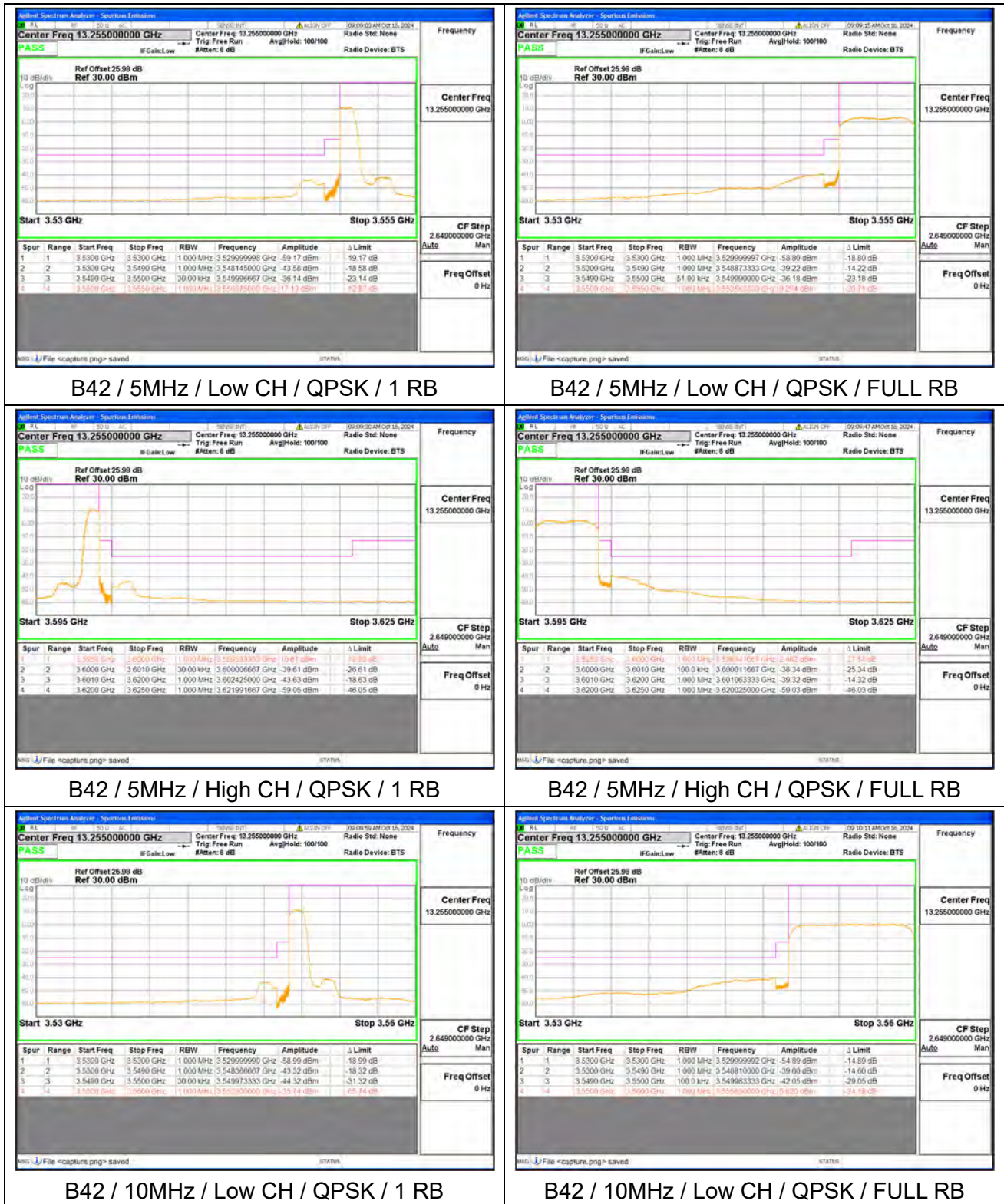
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.6.3. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.6.4. Test Result

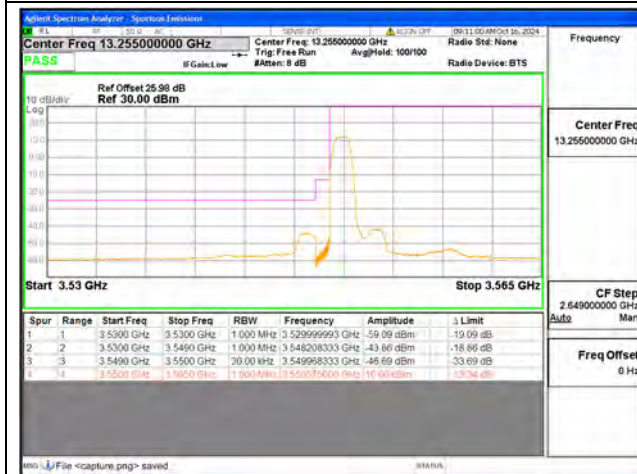




B42 / 10MHz / High CH / QPSK / 1 RB



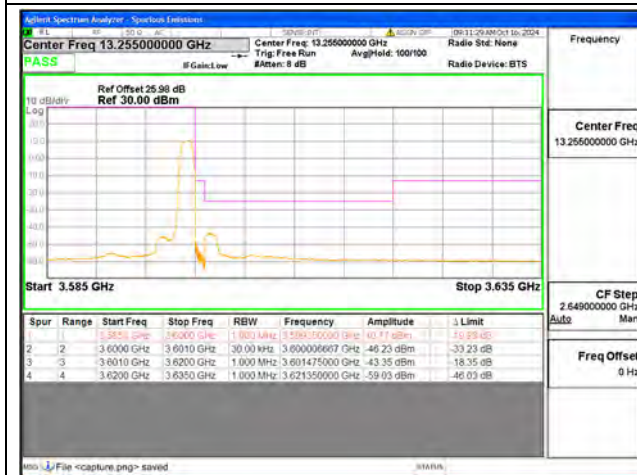
B42 / 10MHz / High CH / QPSK / FULL RB



B42 / 15MHz / Low CH / QPSK / 1 RB



B42 / 15MHz / Low CH / QPSK / FULL RB



B42 / 15MHz / High CH / QPSK / 1 RB



B42 / 15MHz / High CH / QPSK / FULL RB



B42 / 20MHz / Low CH / QPSK / 1 RB



B42 / 20MHz / Low CH / QPSK / FULL RB



B42 / 20MHz / High CH / QPSK / 1 RB



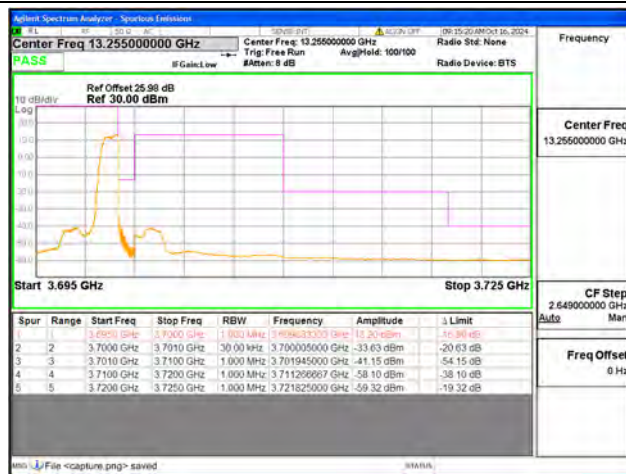
B42 / 20MHz / High CH / QPSK / FULL RB



B43 / 5MHz / Low CH / QPSK / 1 RB



B43 / 5MHz / Low CH / QPSK / FULL RB



B43 / 5MHz / High CH / QPSK / 1 RB



B43 / 5MHz / High CH / QPSK / FULL RB



B43 / 10MHz / Low CH / QPSK / 1 RB



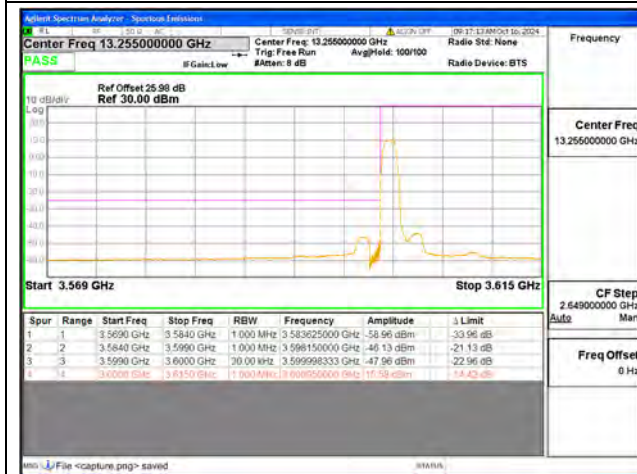
B43 / 10MHz / Low CH / QPSK / FULL RB



B43 / 10MHz / High CH / QPSK / 1 RB



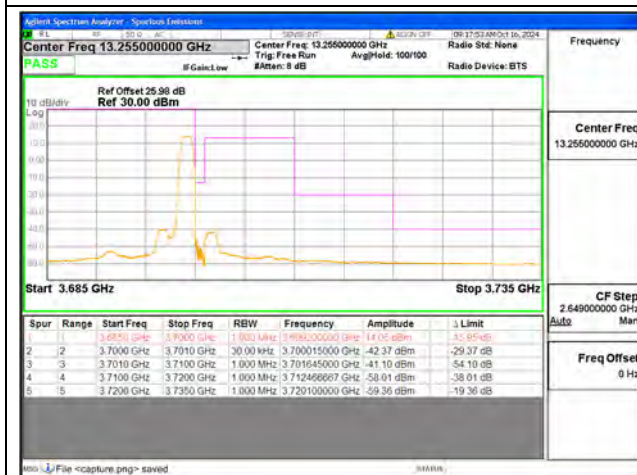
B43 / 10MHz / High CH / QPSK / FULL RB



B43 / 15MHz / Low CH / QPSK / 1 RB



B43 / 15MHz / Low CH / QPSK / FULL RB



B43 / 15MHz / High CH / QPSK / 1 RB



B43 / 15MHz / High CH / QPSK / FULL RB



B43 / 20MHz / Low CH / QPSK / 1 RB



B43 / 20MHz / Low CH / QPSK / FULL RB



B43 / 20MHz / High CH / QPSK / 1 RB



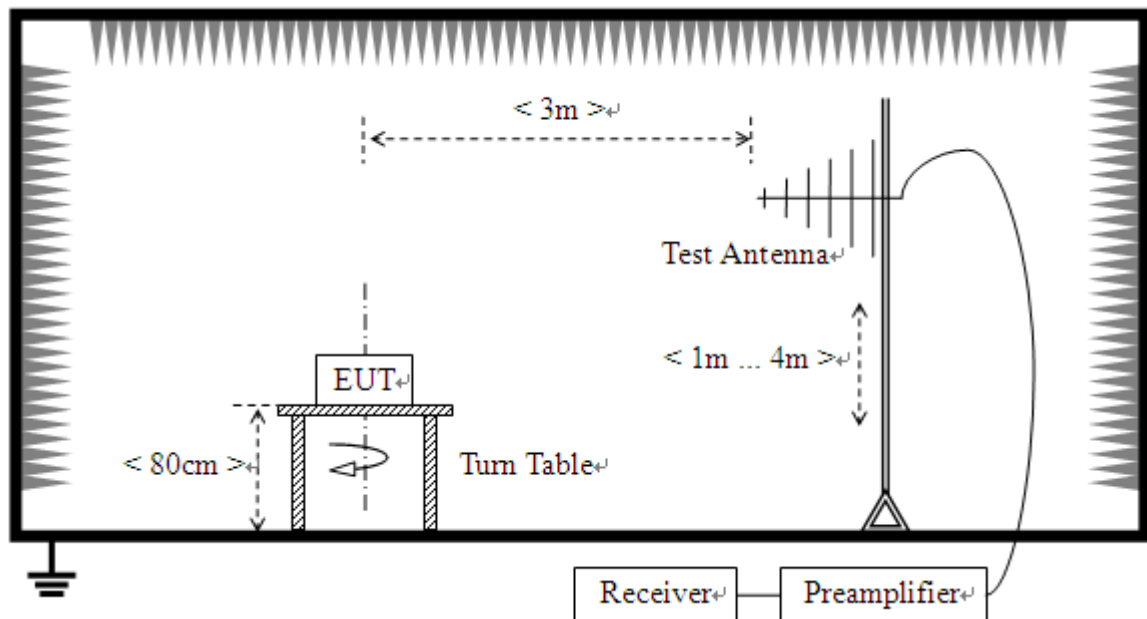
B43 / 20MHz / High CH / QPSK / FULL RB

2.7. Radiated Spurious Emissions

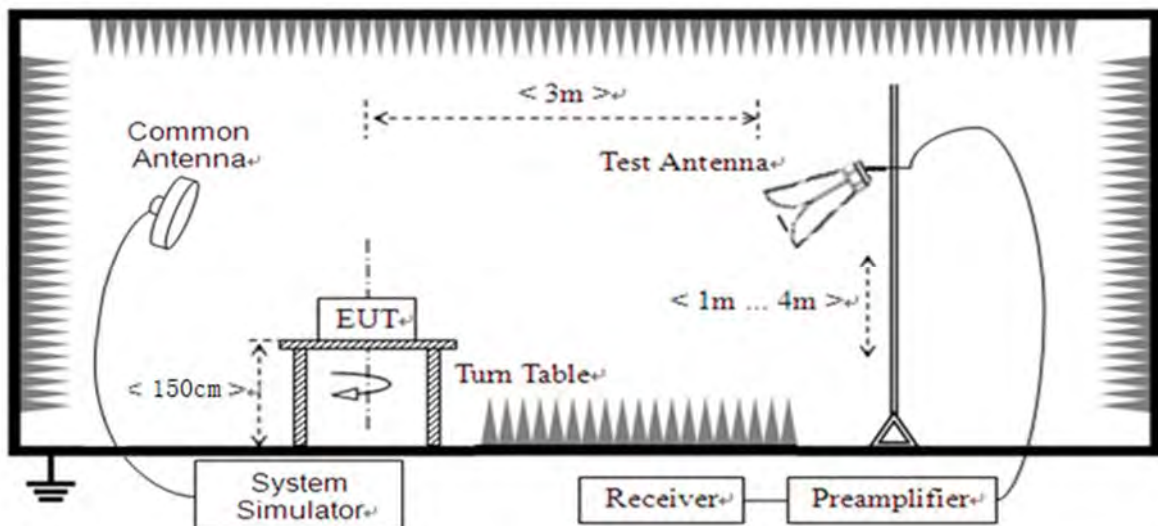
2.7.1. Requirement

The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz .

2.7.2. Test Description



(For the test frequency from 30MHz to 1GHz)



(For the test frequency above 1GHz)



The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360° to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.7.3.Test procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements.



2.7.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT} .

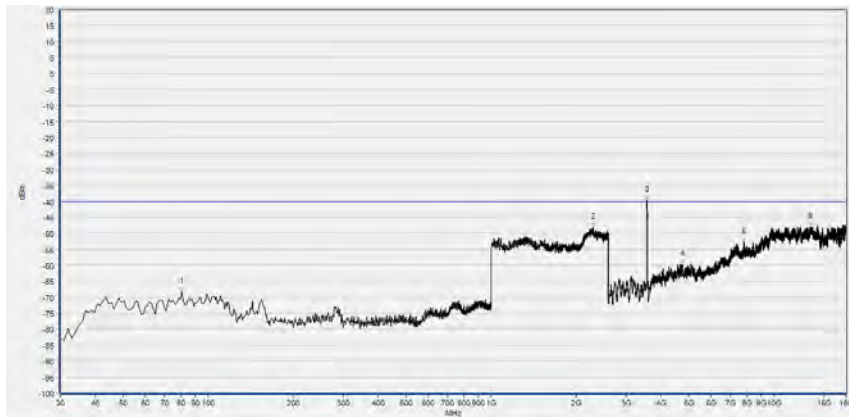
Note1: The power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band, only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note4: N/A means the frequency is the basic frequency or the base station frequency, they are no need to verdict.

LTE Band 42, 20MHz BW, Low Channel, QPSK

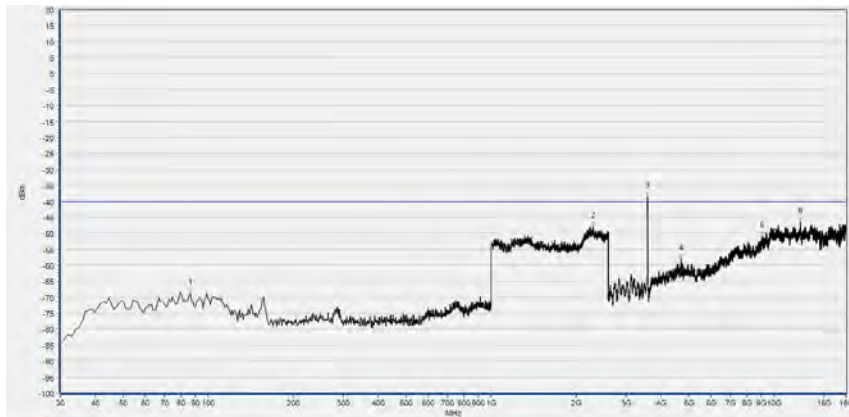


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	80.490	-68.38	-40.00	Horizontal	PASS
2	2300.501	-48.27	-40.00	Horizontal	PASS
3	3551.910	-39.77	-40.00	Horizontal	N/A
4	4744.109	-59.67	-40.00	Horizontal	PASS
5	7818.564	-52.80	-40.00	Horizontal	PASS
6	13471.494	-47.92	-40.00	Horizontal	PASS

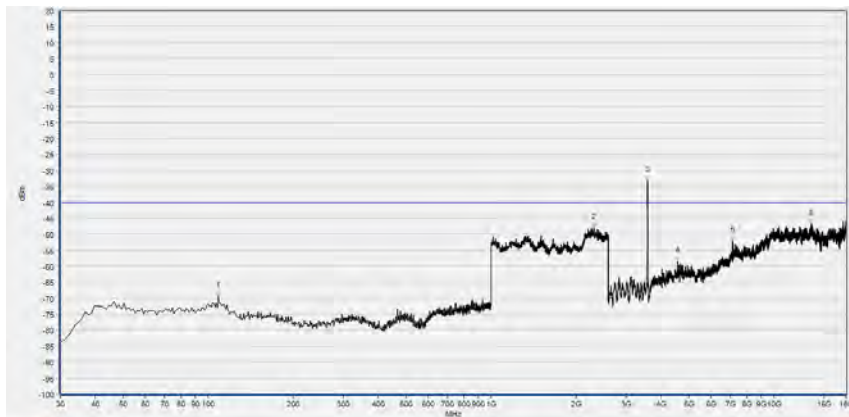


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	73.694	-65.38	-40.00	Vertical	PASS
2	2250.851	-47.59	-40.00	Vertical	PASS
3	3564.233	-31.25	-40.00	Vertical	N/A
4	4747.189	-59.09	-40.00	Vertical	PASS
5	7116.183	-49.97	-40.00	Vertical	PASS
6	12380.956	-46.42	-40.00	Vertical	PASS

LTE Band 42, 20MHz BW, Mid Channel, QPSK

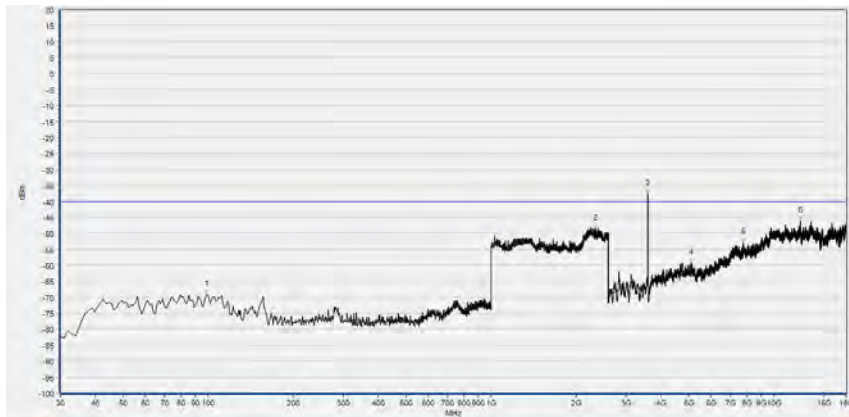


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	86.316	-68.62	-40.00	Horizontal	PASS
2	2295.696	-47.87	-40.00	Horizontal	PASS
3	3567.313	-38.42	-40.00	Horizontal	N/A
4	4685.577	-58.08	-40.00	Horizontal	PASS
5	9087.778	-50.88	-40.00	Horizontal	PASS
6	12399.440	-46.37	-40.00	Horizontal	PASS



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	108.649	-69.40	-40.00	Vertical	PASS
2	2305.305	-48.00	-40.00	Vertical	PASS
3	3567.313	-33.08	-40.00	Vertical	N/A
4	4571.594	-58.37	-40.00	Vertical	PASS
5	7153.151	-52.05	-40.00	Vertical	PASS
6	13576.235	-46.76	-40.00	Vertical	PASS

LTE Band 42, 20MHz BW, High Channel, QPSK

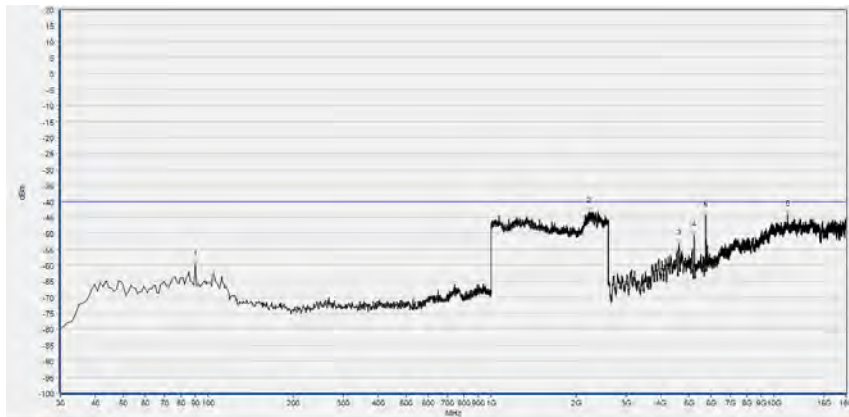


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	98.939	-69.15	-40.00	Horizontal	PASS
2	2340.541	-48.70	-40.00	Horizontal	PASS
3	3582.717	-37.36	-40.00	Horizontal	N/A
4	5110.702	-59.44	-40.00	Horizontal	PASS
5	7781.596	-52.77	-40.00	Horizontal	PASS
6	12405.601	-46.13	-40.00	Horizontal	PASS

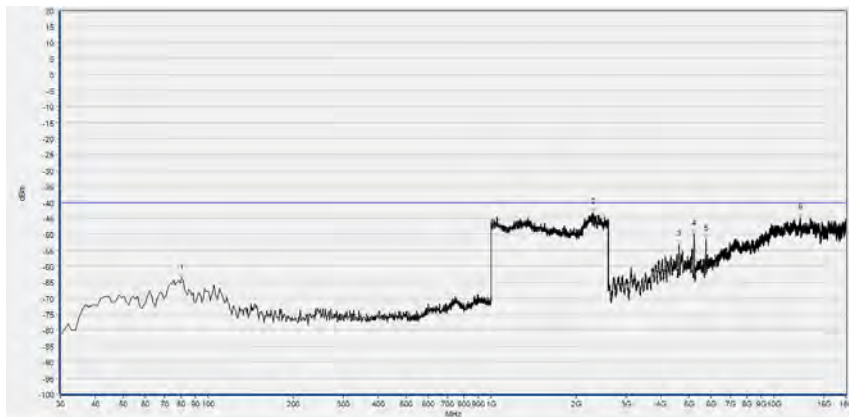


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	108.649	-69.76	-40.00	Vertical	PASS
2	2313.313	-47.77	-40.00	Vertical	PASS
3	3598.120	-30.95	-40.00	Vertical	N/A
4	7180.876	-50.83	-40.00	Vertical	PASS
5	9802.480	-47.04	-40.00	Vertical	PASS
6	13486.897	-46.33	-40.00	Vertical	PASS

LTE Band 43, 20MHz BW, Low Channel, QPSK



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	90.200	-59.84	-40.00	Horizontal	PASS
2	2218.819	-43.31	-40.00	Horizontal	PASS
3	4627.045	-53.39	-40.00	Horizontal	PASS
4	5227.766	-50.69	-40.00	Horizontal	PASS
5	5739.148	-44.34	-40.00	Horizontal	PASS
6	11161.032	-44.18	-40.00	Horizontal	PASS

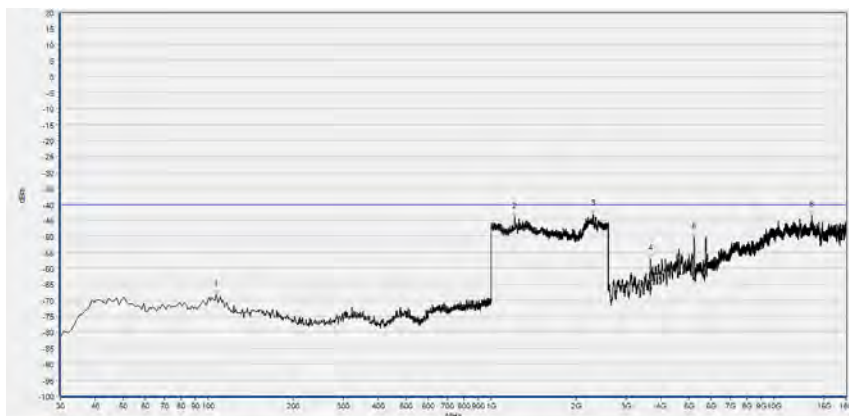


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	80.490	-63.90	-40.00	Vertical	PASS
2	2298.899	-43.22	-40.00	Vertical	PASS
3	4623.965	-53.41	-40.00	Vertical	N/A
4	5227.766	-49.92	-40.00	Vertical	PASS
5	5745.309	-51.59	-40.00	Vertical	PASS
6	12408.682	-44.81	-40.00	Vertical	PASS

LTE Band 43, 20MHz BW, Mid Channel, QPSK



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	90.200	-59.45	-40.00	Horizontal	PASS
2	2396.597	-43.29	-40.00	Horizontal	PASS
3	4617.804	-54.72	-40.00	Horizontal	PASS
4	5227.766	-50.58	-40.00	Horizontal	PASS
5	5739.148	-48.08	-40.00	Horizontal	PASS
6	12380.956	-44.47	-40.00	Horizontal	PASS

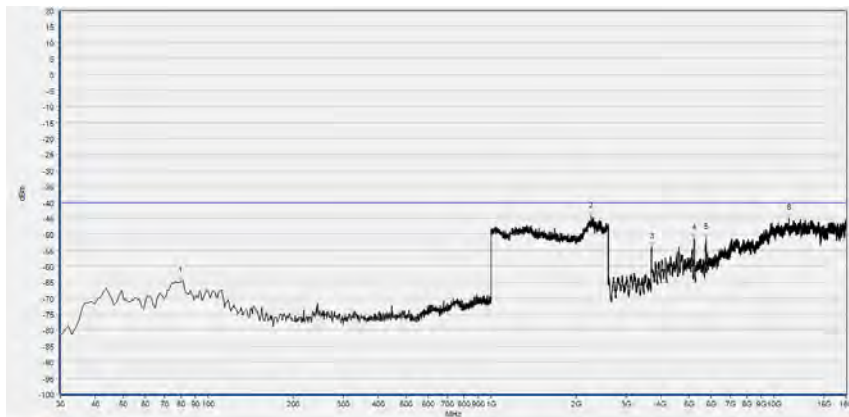


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	106.707	-68.27	-40.00	Vertical	PASS
2	1214.615	-44.00	-40.00	Vertical	PASS
3	2297.297	-42.94	-40.00	Vertical	PASS
4	3656.651	-57.04	-40.00	Vertical	N/A
5	5230.846	-50.43	-40.00	Vertical	PASS
6	13594.719	-43.46	-40.00	Vertical	PASS

LTE Band 43, 20MHz BW, High Channel, QPSK



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	90.200	-59.65	-40.00	Horizontal	PASS
2	2467.067	-43.60	-40.00	Horizontal	PASS
3	4550.030	-54.65	-40.00	Horizontal	PASS
4	5227.766	-50.00	-40.00	Horizontal	PASS
5	5739.148	-48.32	-40.00	Horizontal	PASS
6	13619.364	-45.05	-40.00	Horizontal	PASS



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	79.520	-64.60	-40.00	Vertical	PASS
2	2263.664	-44.39	-40.00	Vertical	PASS
3	3696.699	-53.92	-40.00	Vertical	N/A
4	5227.766	-51.28	-40.00	Vertical	PASS
5	5745.309	-51.04	-40.00	Vertical	PASS
6	11278.096	-45.01	-40.00	Vertical	PASS



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test Items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



4. Test Equipment Utilized

4.1 Conducted Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY51511149	N9020A	Agilent	2024.06.19	2025.06.18
Communication Test Station	6200995016	MT8820C	Anritsu	2023.09.19	2024.09.18
				2024.09.11	2025.09.10
Temperature Chamber	S022177101 00089002	KMT-36LF 1A0	KOME G	2023.09.19	2024.09.18
				2024.09.11	2025.09.10

4.2 List of Software Used

Description	Manufacturer	Software Version
MOR-2023E Test System	MORLAB	V7.99
MORLAB EMCR	MORLAB	V1.2

**4.3 Radiated Test Equipment**

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
System Simulator	152038	CMW500	R&S	2023.10.17	2024.10.16
Receiver	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Horn	9120D-963	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0 .5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF- 2	Qualwave	2024.07.03	2025.07.02
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40 C-S	Decentest	2024.05.30	2025.05.29
Notch Filter	N/A	WRCGV -LTE B42	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B43	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

____ END OF REPORT ____